

## FUSELAGE ASSEMBLY

### STEP 1

Saran Wrap (or similar) spread under frame will prevent frame from sticking to Plan. Fuselage is built on flat surface directly on Plan. Cement bulkheads #19 together (crease on inside) sandwiching landing gear into crease, between them. Cement bulkhead halves #21's together. Pin parts in place as shown, cementing #3 between #2 and #4, flush with rear.

### 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 #6 thru #13 vertically in place, being certain that bulkheads #7&8 are cracked on crease, angled, as shown on full size center frame assembly drawing.

### STEP 3

Keels #14 & #16 are inserted into their respective notches in sides of Bulkheads, from #6 to rear. Note that keels (as well as stringers) that will be installed are in many cases past edge of Bulkhead, as shown on Sketches and typical cross section drawing. Cement cabin side #16 from #7 to #11 flush with keel #14 and rear of #11. Cement 3/32 sq. Top Corner Stringer from #16 to rear, then install Stringer below it. Stab opening is formed by cementing 3/32 stringer from #13 to rear adjoining stringer just installed and slot in #2 as shown on sketch & side view. Cement #5 to front of #6 and install 1/16 x 3/32 stringer (vertical) in place.

### STEP 4

Remove frame from flat surface and cement assembled landing gear bulkhead #19 into fuselage frame-half, against front of #8. 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.) Cement cabin roof parts #17 and #18 in place into their respective notches in sides of Bulkheads, from #11. Cement #52's, which form windshield V, to bottom of roof members and between cabin sides as shown on sketch & side view. Stringers are now installed vertically. Location of stringers is shown on bulkheads by crease marks. Cement the bottom stringers in place from notches in #6 to rear. There are four bottom stringers on each side. Install the top cowl stringers into notches between #6 & #7. Top rear stringers are cemented flush with top of #17's and #18's, extending to rear as shown. Stringers may either be beveled in place or stopped short at rear where installation becomes tight. #20 strut and landing gear plate is cemented between #15 and stringer below it, from bulkhead #7 to #9, flush with outside. Bend tail gear as shown on detail, and cement securely into fuselage as shown in sketch and side view.

## 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 Stab in slot for same, front resting against #13. Cement Rudder vertically in place to rear and top of Fuselage. Be certain that stabilizer is horizontal & Rudder is vertical. Slip fuselage landing gear fairing over wire landing gear and cement in place on fuselage as shown on sketch and side view, working continuously so that cement does not dry. Cement #5's on wire strut, (in inside crease) sandwiching strut between them. Hold together with pins or tape. On flying models allow space between strut fairing for shock movement. Slip wheel pant fairing over strut, followed by wheel pant and wheel. Wheel is captured on axle in pant when assembling. Protruding axle may be trimmed flush and secured to pant by cementing to inside of pant. Fairing is positioned as shown and cemented in place. Round off to cross section and install into notches in top of fuselage and #50 on bottom of wing. Model is now painted. Scale color schemes and flight picture on kit box are as necessary. Slip tail wheel on axle. Hold in place with drop of cement on

end of axle. Install wing panels by inserting part #39 through notch in #16's. Spars are secured cemented against #9 inside of fuselage, and panels are pinned and cemented tightly against front half of #16's, so that they assume proper Dihedral angle. Opening at rear between wing and fuselage is closed off with wedge #51 on bottom. Top opening is covered with silkspan. Care must be taken that ribs are perfectly flush with top of #16's to assure proper angle of incidence. Set model on flat surface and check that both tips are the same height and Stab is horizontal. Allow to dry thoroughly before sewing. Round off front of #5 with fine sandpaper to shape shown on side view. Cowl is now cemented to assembled #21. Assembly is then cemented to front of #5. Use sealant to match center hole for nose bearing. Use light coats of cement applied sparingly. If necessary, make a hook in a piece of wire, to lower the loop of rubber into cowl. After engaging it on cowl, pull rubber through cowl and insert into propeller shaft. Nose bearing fits into cowl. Installation of rigging, movable controls, and other detail scale installations are optional and described in Scale note. Installation for Control Line and R/C are described in respective notes. This completes your Stinson Gullwing SR-8. See Flight Instructions before flying model. GOOD LUCK!! HAPPY LANDINGS!!

Apply Decals by dipping in water and sliding off into position. Cut Instrument Panel from plan and cement to #7. Make windshield as described in detail note then cement in place, wrapping around sides of fuselage. Cement side windows in place. Hold in place with pins until dry. Outlines of Scale Control surfaces may be drawn in place with India Ink. Insert straight end of Propeller shaft through rear 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" dowel that crosses through rear of fuselage, by dropping rubber into fuselage from nose, far enough so that dowel can be inserted. Tie a length of thread or make a hook in a piece of wire, to lower the loop of rubber into fuselage. After engaging it on cowl, pull rubber through cowl and insert into propeller shaft. Nose bearing fits into cowl. Installation of rigging, movable controls, and other detail scale installations are optional and described in Scale note. Installation for Control Line and R/C are described in respective notes. This completes your Stinson Gullwing SR-8. See Flight Instructions before flying model. GOOD LUCK!! HAPPY LANDINGS!!

## FUSELAGE CENTER FRAME ASSEMBLY

### WINDSHIELD PATTERN

Place celluloid provided over full size drawing and score outline with razor or knife. Celluloid breaks easily on scored line. Cement in place as described in Final Assembly.

### TAIL GEAR DETAIL

Bend to shape of this full size pattern from .045 wire provided; install as described in Step #4.

### PLASTIC PARTS DETAIL

For best results, follow instructions carefully. **COWL:** 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. Engine cowl is placed on bulkhead #21 for support while sanding. **WHEELPANTS:** Cut from plastic sheet and drill 1/16" hole at bottom of slot and thru impression on other side. **STRUT FAIRINGS:** Cut upper and lower fairings from plastic. Then cut out the closed side as shown on sketch. Fairings and wheelpants are installed 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 or enamel can be used. Model airplane dope can be used only if applied if LIGHT spray coats, allowing time 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. Darker paints may be applied directly to plastic. 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!

### ENGINE INSTALLATION

Engine 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 fire cut plywood firewall against #21. Drill 3/32" holes at punch marks and mount engine to fire wall with #2 nuts and bolts (not provided) and tighten nuts securely. Cut plastic nut plates from molded sheet, trim to 1/8" around nut itself to provide gluing surface, then cement to back of #6 over nuts, 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 #11 with 1/32" or 1/16" sheet balsa. Engine is then installed after model has been painted. Cut out front and top of cowl for engine clearance. Cowl can either be cemented in place, breaking glue joint back time engine is removed, or it can be made removable by cementing small blocks to the plywood firewall, which receives tiny wood screws (not provided) through cowl.

### FUSELAGE CROSS SECTION

Fuselage Cross-Section above is at Bulkhead #12. Note that there is only one Fuselage Frame Assembly in center. Bulkhead halves are cemented directly to it. See Step #3.

### 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 #13 to rear with scrap 1/16" sheet balsa, flush with outside of frame; between #14 and #15 cut 1/8" slot for control rod as shown. Cut two 22" lengths of lead-out lines (not provided in kit) and fasten them to bell crank. Mount bell crank 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. Cement stabilizer to fuselage as described in Final Assembly Note. Tape elevators in neutral position. Control system must operate freely, neither up nor down. Bend 1/4" of one end of 1/16" wire for control rod at right angle. Loosen bell crank and insert rod from bottom with spur vertical, then secure bell crank. 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 bell crank in neutral position as shown. Clip off excess and insert into horn. Solder washer on and 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 in place. Cement rudder to fin and rear of fuselage, angled 1/2" to outside of circle flown, 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 #47 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 Stinson Reliant. GOOD LUCK AND GOOD FLYING!!

### 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 nut 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.

### WING GUIDE

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

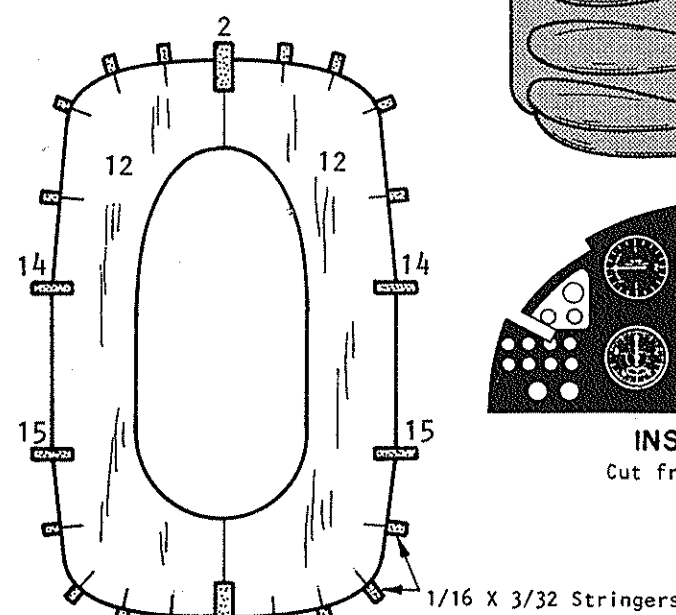
## FLIGHT INSTRUCTIONS

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 developed, remove using steam method described in Silkspan Step. Model is now ready. Pick a calm day for test flying. On Rubber-Powered models, wind Propeller clockwise and launch into any prevailing wind, slightly nose down at a point on the ground approximately 50 ft. ahead of you. If model noses up and then falls off and stalls (AFTER MODEL WAS BALANCED), then bend Elevators down slightly, using hot breath in same manner as steam. If model dives, bend Elevators up. If model veers too much to one side, bend Rudder to opposite side. Take-offs require more power and therefore more turns in Rubber Motor. For longer flights and competition, it is recommended that the loop of rubber be lubricated with a model lubricant (available at most Hobby Shops) or with Castor Oil, apply sparingly. Use winder which you can make by tightening hook into hand drill. To store winds in motor, stretch rubber out 3 to 5 times original length, then proceed to wind, moving slowly back to model. Feeling rubber from time to time to be certain it does not get so taut that it breaks. Upon reaching the Nose, motor should be completely wound. When replacing Rubber Motor, purchase contest grade T56 brown rubber at your favorite Hobby Shop. Engine powered Free-Flight models are tested and flown in same basic manner as above and is described in Flight Instructions at end of Radio Control Installation Note. GOOD LUCK AND GOOD FLYING!!

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### INSTRUMENT PANEL

Cut from Plan and Cement to #7.

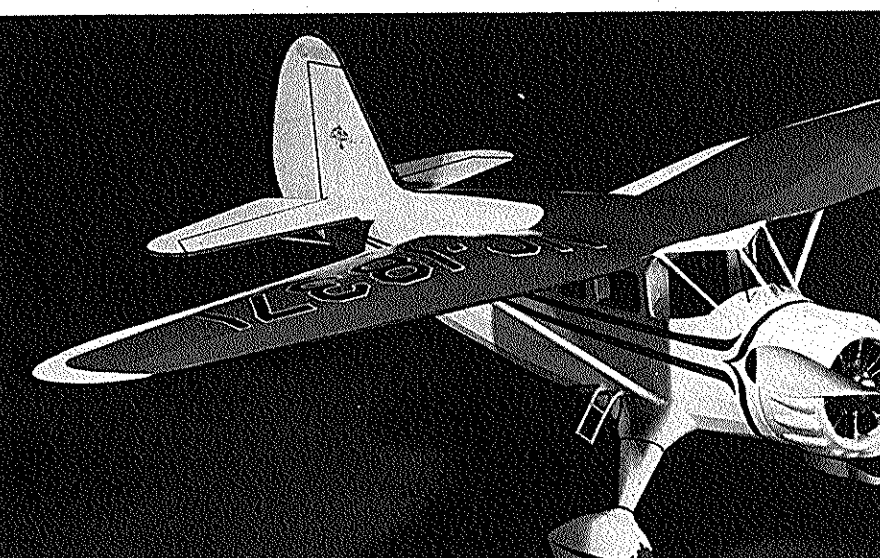


### FUSELAGE CROSS SECTION

Fuselage Cross-Section above is at Bulkhead #12. Note that there is only one Fuselage Frame Assembly in center. Bulkhead halves are cemented directly to it. See Step #3.

# STINSON RELIANT SR-8 GULLWING

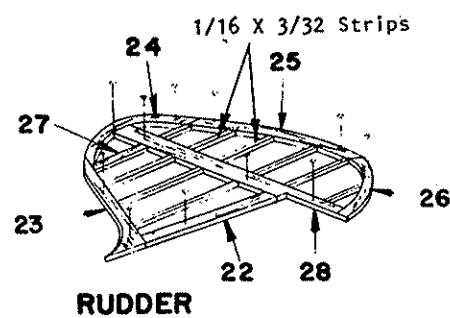
KIT E8  
SCALE 3/4"-1'0"  
SPAN 31-3/8"





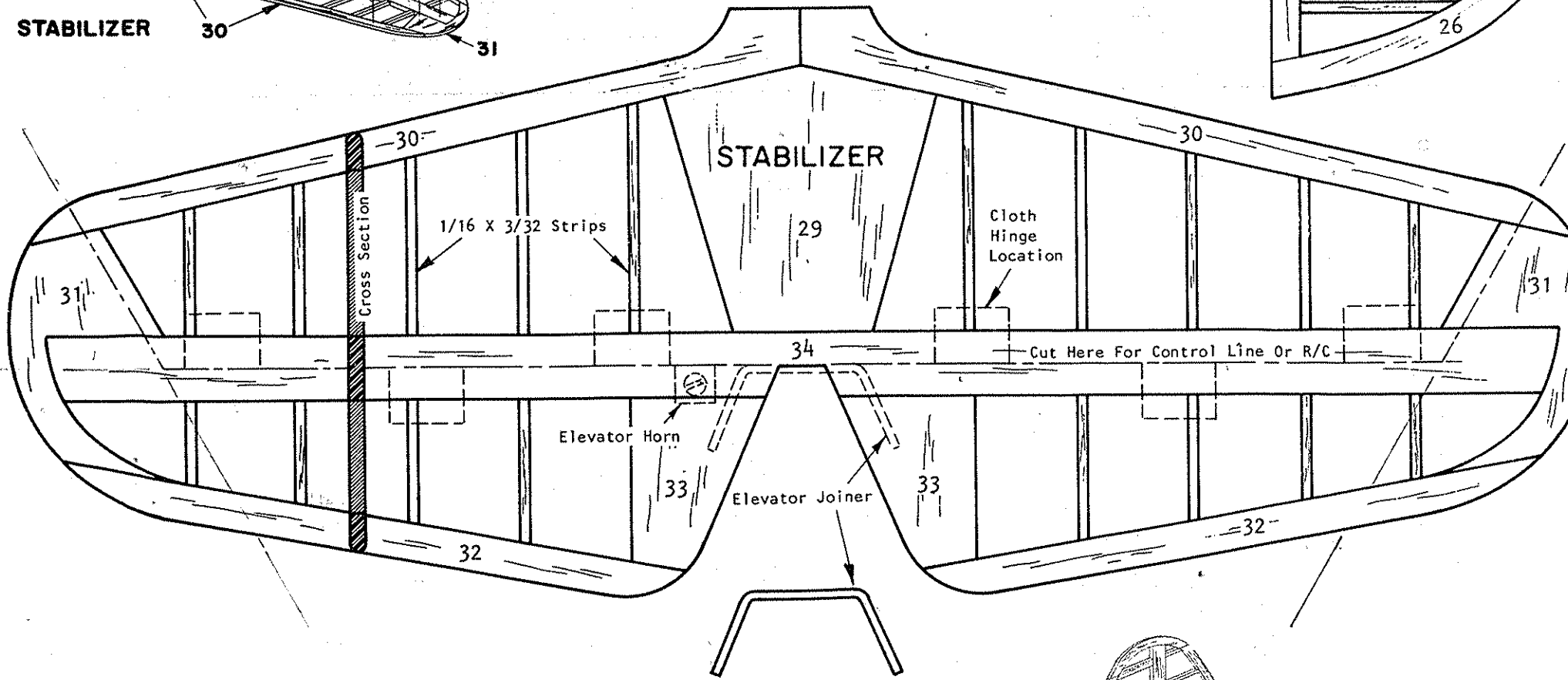
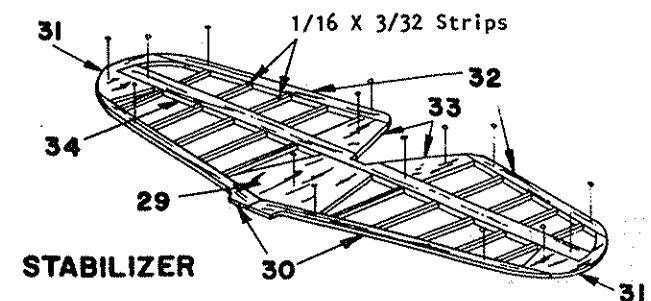
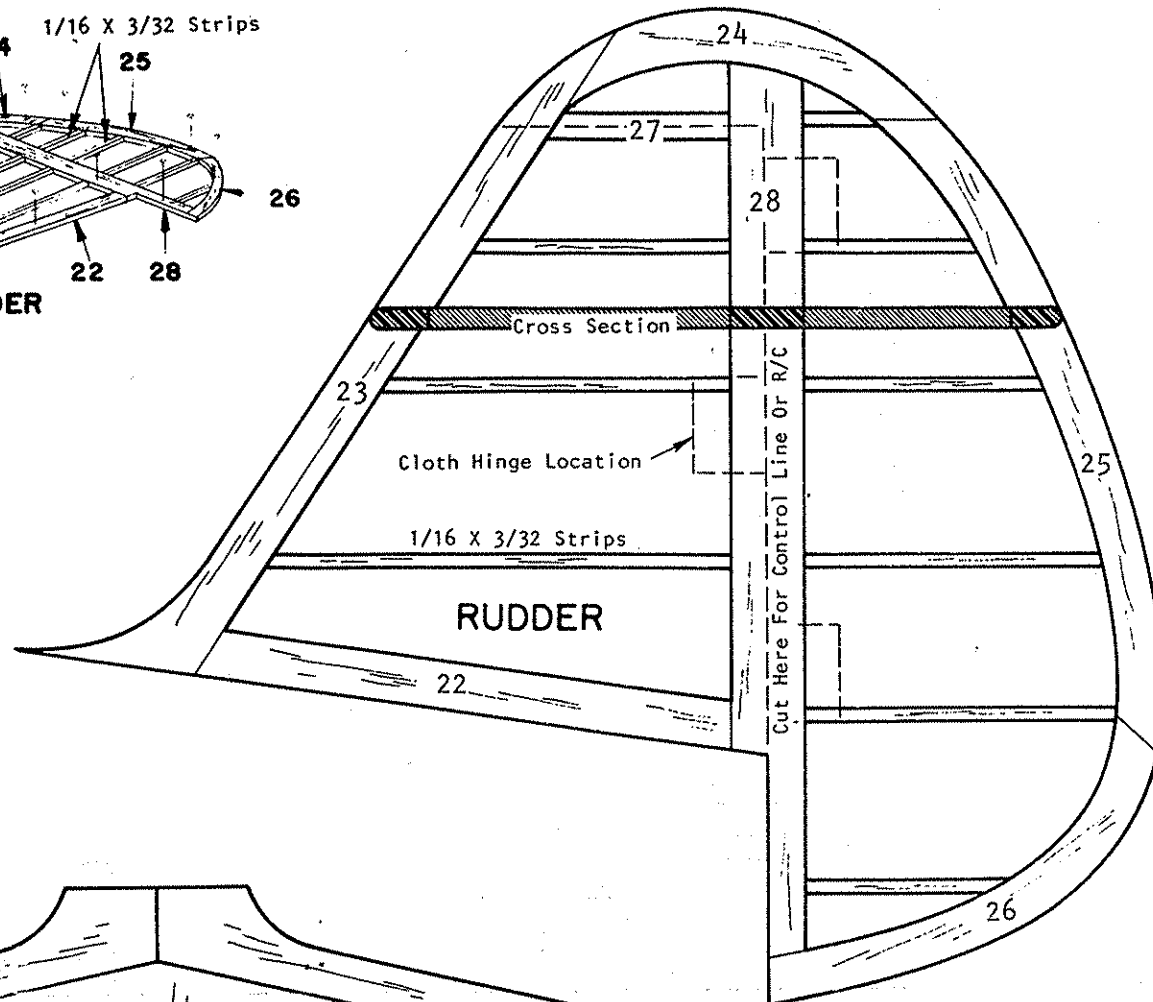
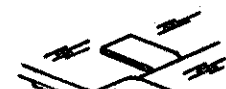
## TAIL ASSEMBLY

Tail Surfaces are built directly over 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 #28 & #30 and bottom of #22), 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.



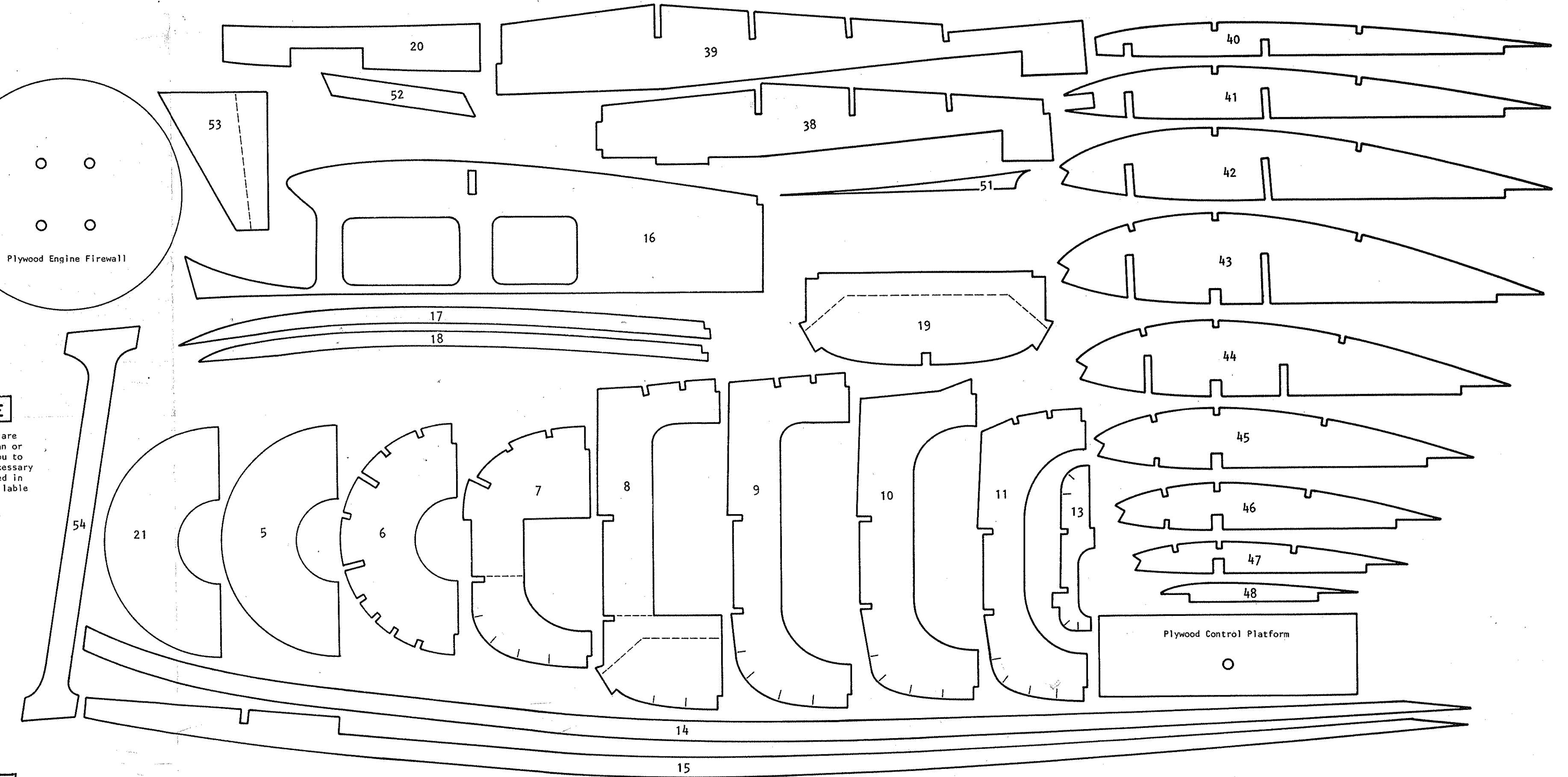
## HINGE DETAIL

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



## DIE CUT PART NOTE

All die cut 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. Die cut parts contained in sheet as furnished in kit are also available from the factory as replacements.



## SILKSPAN TISSUE COVERING

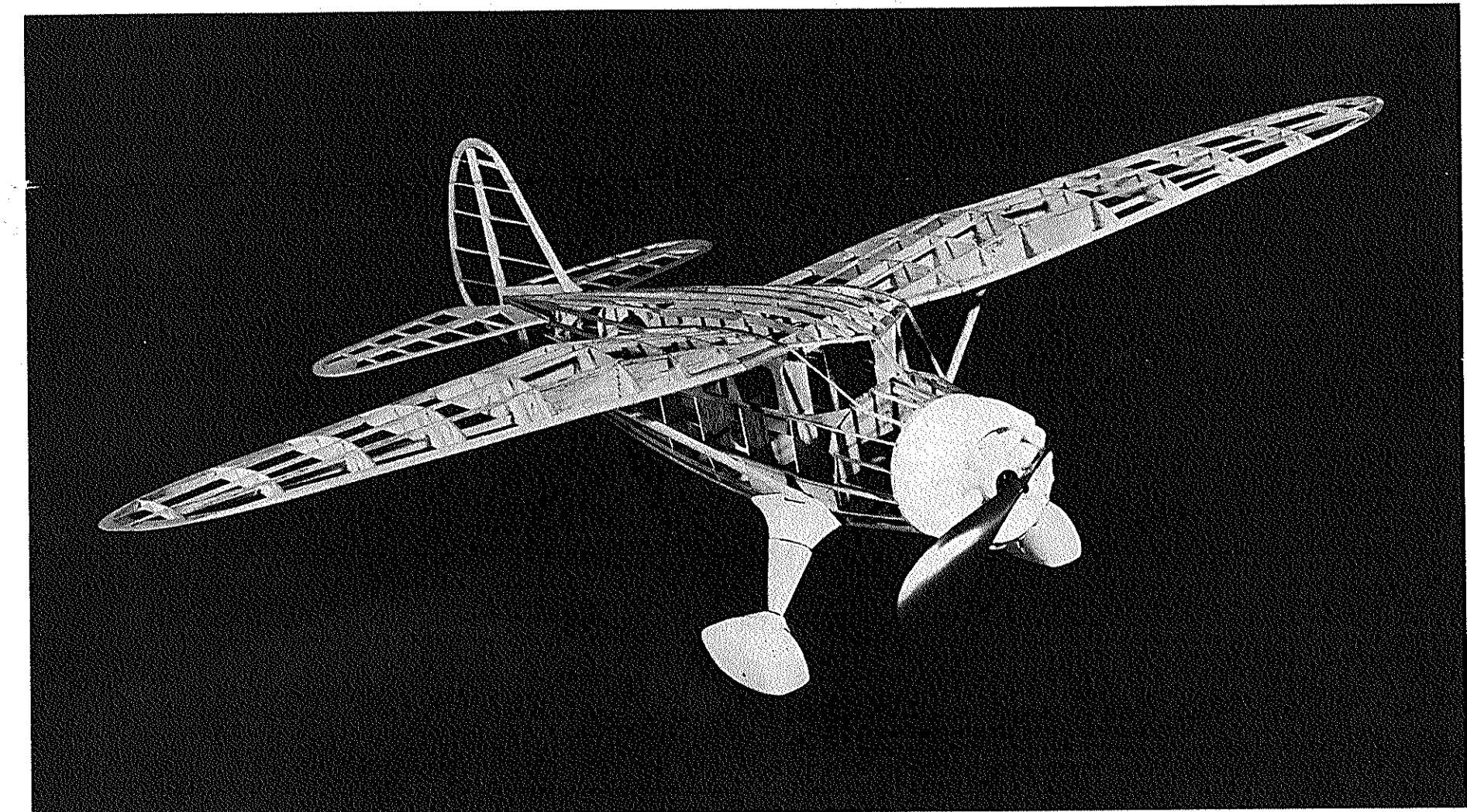
The finest grade wet strength Silkspan Tissue provided in this kit permits covering of most compound curves without wrinkling when moistened with water before applying to frame. Tissue shrinks when dry, to a tight smooth surface. Follow directions for a smoothly covered, warp-free flying model. Use clear 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 from Rib #40 to #43 with one piece each. Then cover top and bottom from #43 to tip with one piece 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 #5 to rear with 1 piece. Cover bottom from #5 to rear with 1 piece. Cover top of cowl in 2 pieces joining over center, ending at #7, cover top with 1 piece. Apply four coats of thin-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 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.

## RADIO CONTROL INSTALLATION

Because of the relatively small size of this Stinson Reliant model, it is recommended that only the lightest Radio equipment be installed (not more than 3oz including battery). The Ace Pulse Proportional System is a good example 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 offset 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 Shin under top of Fuel Tank. Increase Engine RPM as adjustments are made, checking R/C controls before each flight. GOOD LUCK! GOOD FLYING!!



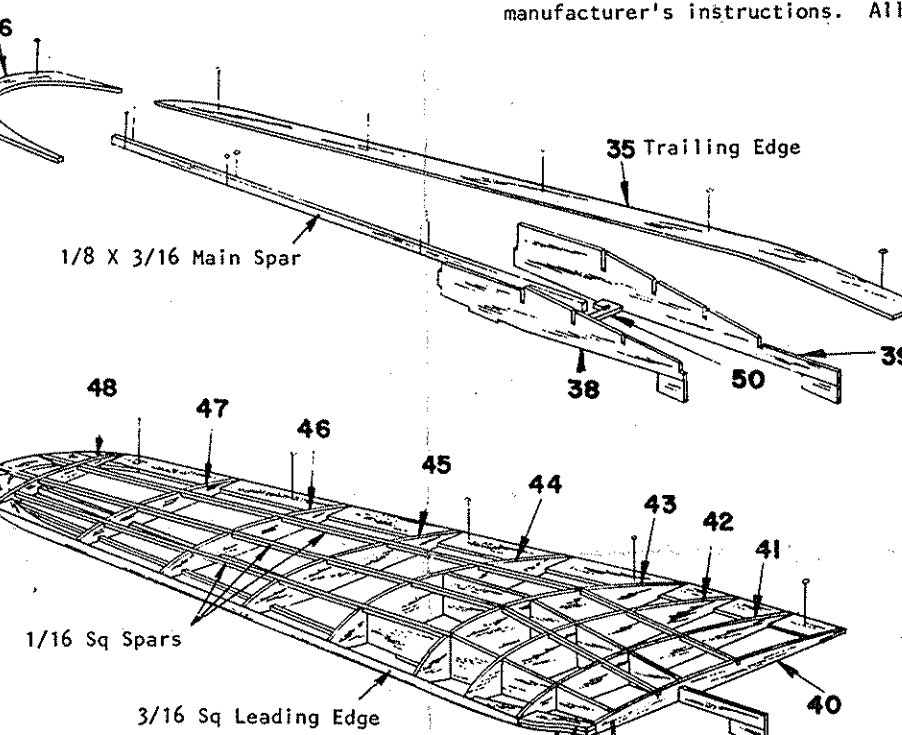
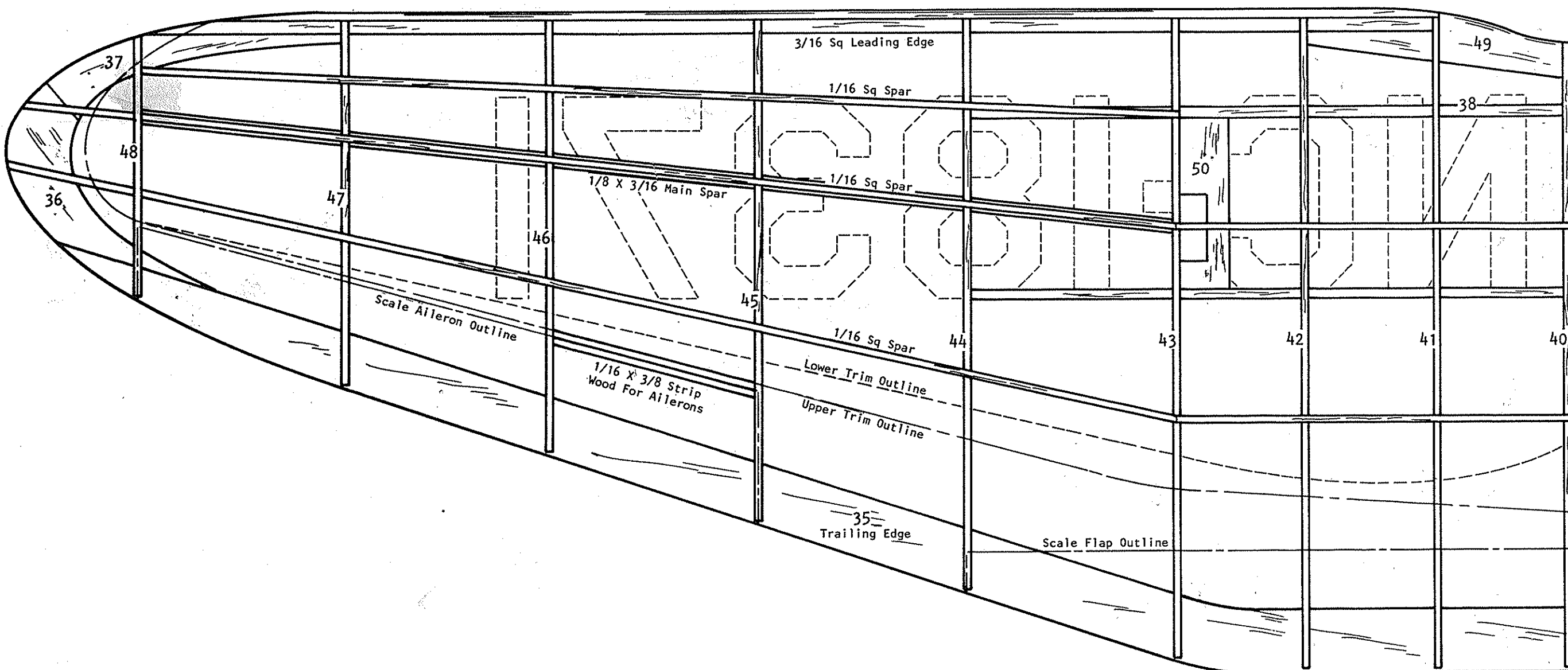
Frame photo reveals the fine engineering of this all time favorite

## SCALE DETAIL

Multiple view drawing and construction sketches of the actual Stinson Reliant reveal a wealth of information, 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. Leading Edges of Wing, which was covered with aluminum dural in the full size craft, may be duplicated with

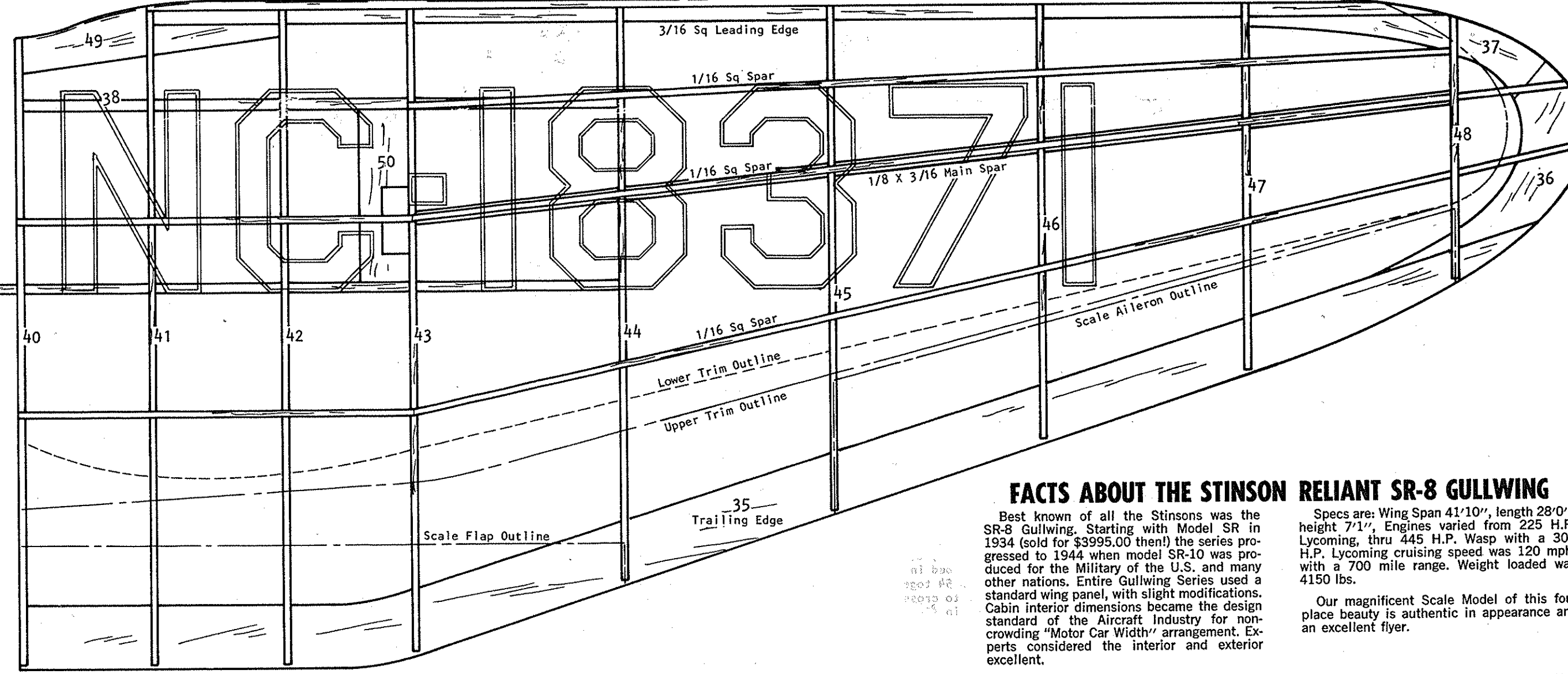
light cardboard provided in the kit, likewise the Forward Cowl back to #9. Plastic Parts and Decals are authentic and correct. Special overlay sketch shows installation of movable controls from the Cockpit. Parts are mostly made from scrap Balsa and Nylon thread. Improvisation at this point by the modeler is a necessity. Reinforce area where the lines exit through Tissue covering with cardboard discs as 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 Wing structure, there is a Leading Edge for Aileron and a Trailing Edge for Wing at that point. When dry, Ailerons are cut from Wing, then re-mounted with Hinges. Model is rigged with thin black thread. A loop made in thin Wire and installed at the proper location will guide Aileron Control Lines from Wing into Fuselage. Be sure when installing Controls, that when stick and Rudder pedals are in neutral position, the Control surfaces are likewise. Propeller is painted Silver with Black tips. Your comments and photographs will be welcome. Write to Sterling Models, Inc. Bel-Field Ave. & Wister St., Philadelphia, PA 19144-U.S.A.



## WING ASSEMBLY

Wing panels are built on flat surface directly on Saran covered plan. Pin parts in place as shown making sure that #38 and #39 are vertical, including 1/8 x 3/16 spar which is cut to length and also pinned place vertically, as shown. Cement all ribs in place vertically by the number as shown. Wing tips consisting of parts #36 and #37 are cemented together on flat surface and allowed to dry; then are cemented in place against trailing edge #35 and thru notch in rib #48 so that it centers on leading edge. Cement #49's together to form double layer as shown in sketch and cement in place as shown. Cement 3/16 sq. x 12 leading edge into front of ribs. Cement the three 1/16 x 3/32 spars vertically into notches as shown, leveling at wing tips. Allow wing to dry thoroughly (overnight recommended) then remove from flat surface and cement the bottom 1/16 x 3/32 spar in place. Remove tabs from #38 and #39 which have been created for that purpose. Opposite wing panel is built in same manner. If movable ailerons are desired, see instruction in scale detail.



## FACTS ABOUT THE STINSON RELIANT SR-8 GULLWING

Best known of all the Stinsons was the SR-8 Gullwing. Starting with Model SR in 1934 (sold for \$3995.00 then) the series progressed to 1944 when model SR-10 was produced for the Military of the U.S. and many other nations. Entire Gullwing Series used a standard wing panel, with slight modifications. Cabin interior dimensions became the design standard of the Aircraft Industry for non-crowding "Motor Car Width" arrangement. Experts considered the interior and exterior excellent.

Specs are: Wing Span 41'10", length 28'0", height 7'1". Engines varied from 225 H.P. Lycoming, thru 445 H.P. Wasp with a 300 H.P. Lycoming, cruising speed was 120 mph, with a 700 mile range. Weight loaded was 4180 lbs.

Our magnificent Scale Model of this four place beauty is authentic in appearance and an excellent flyer.