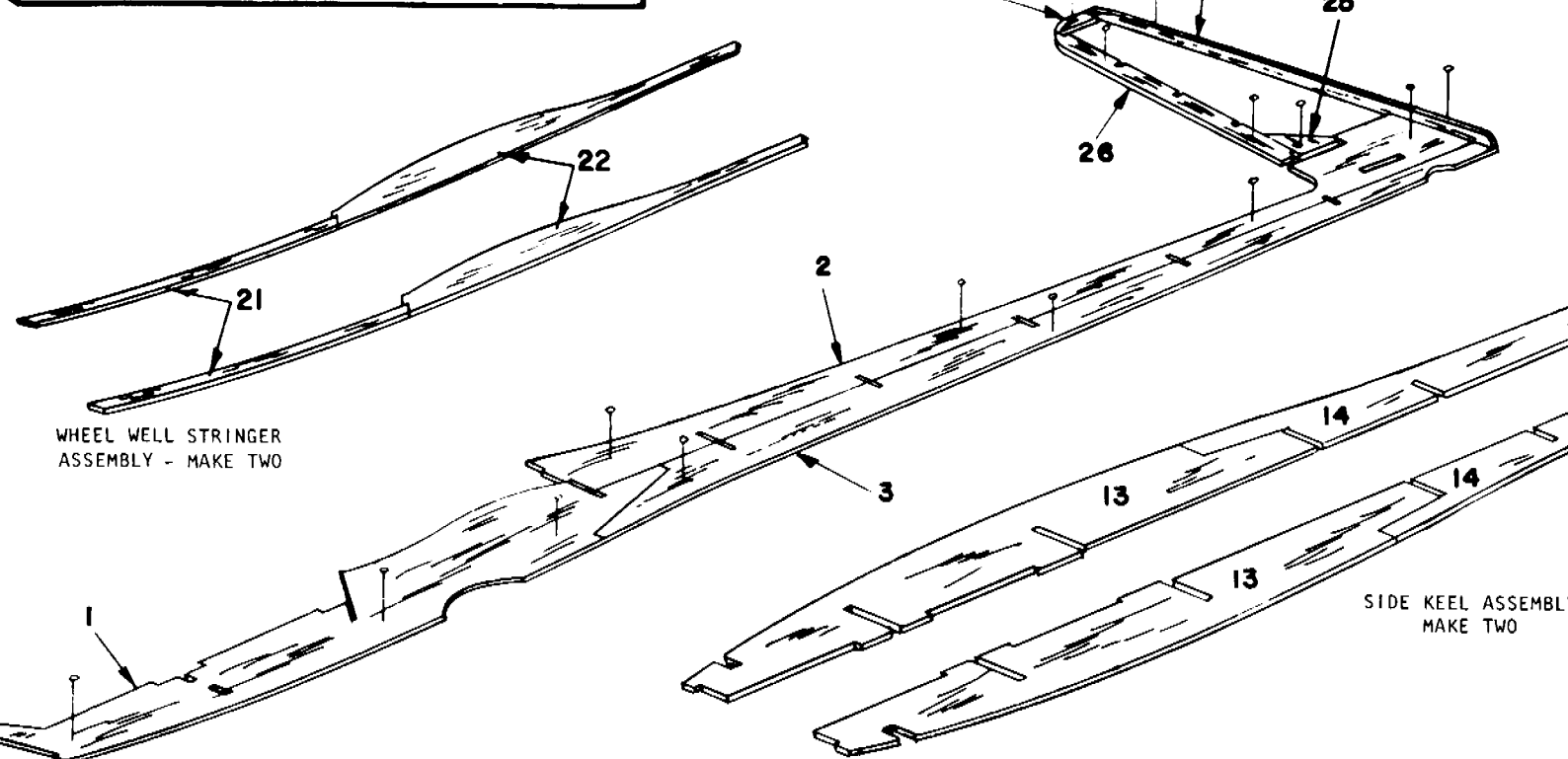
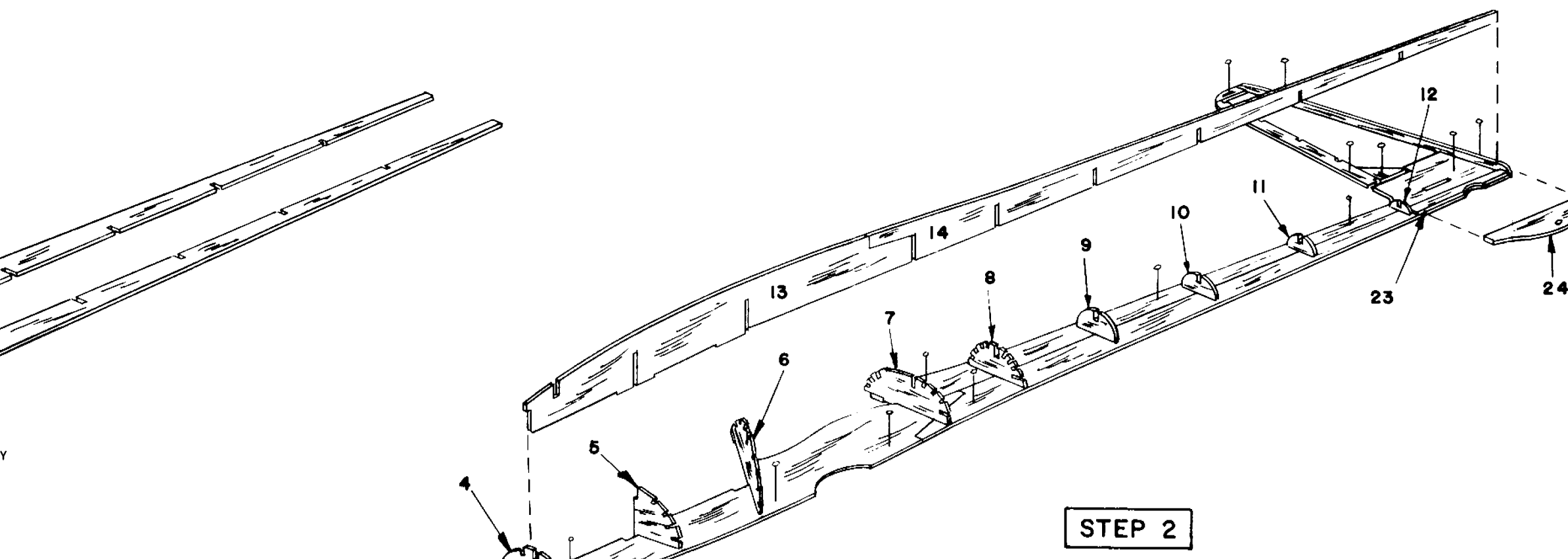


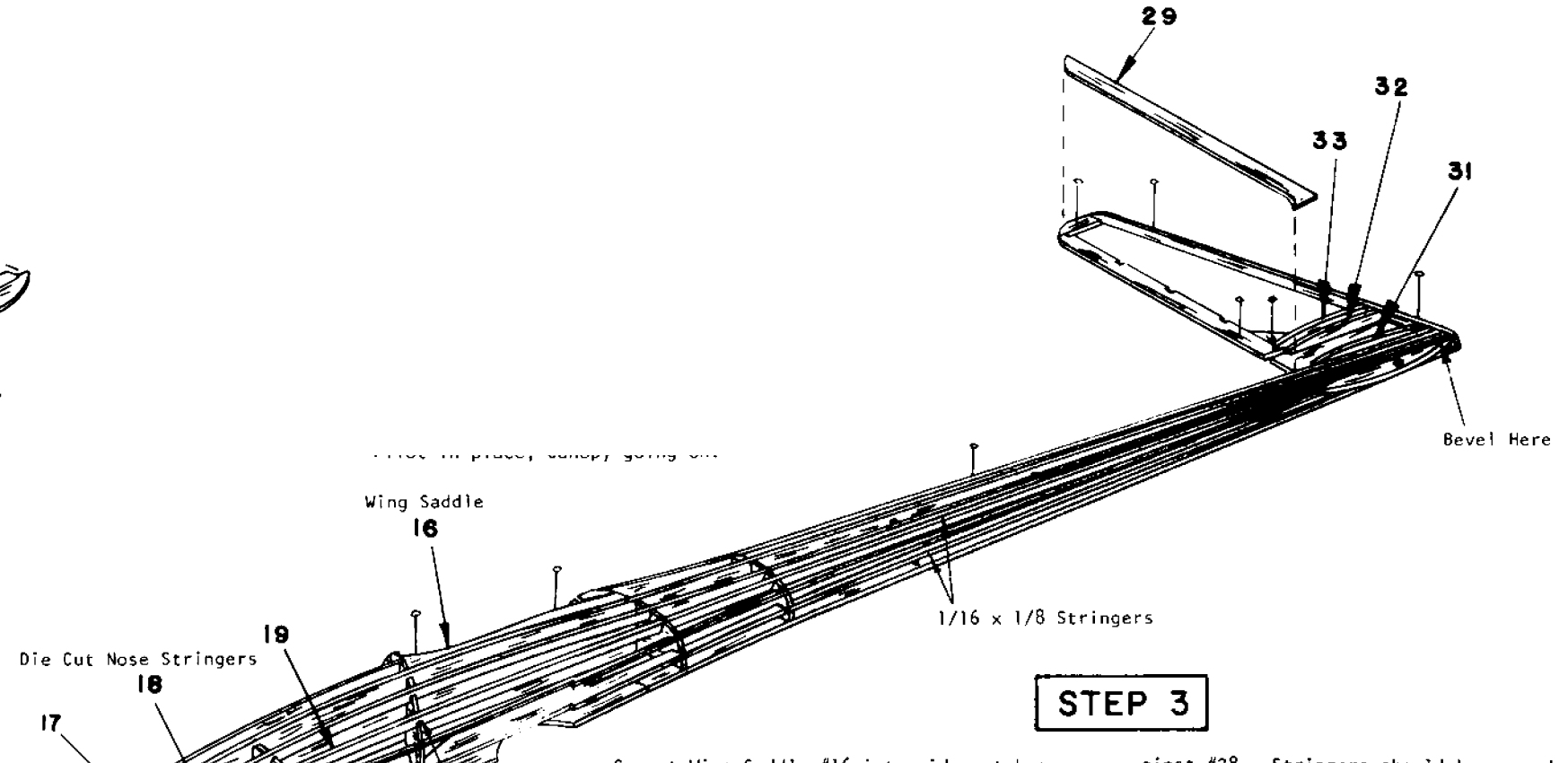
FUSELAGE ASSEMBLY



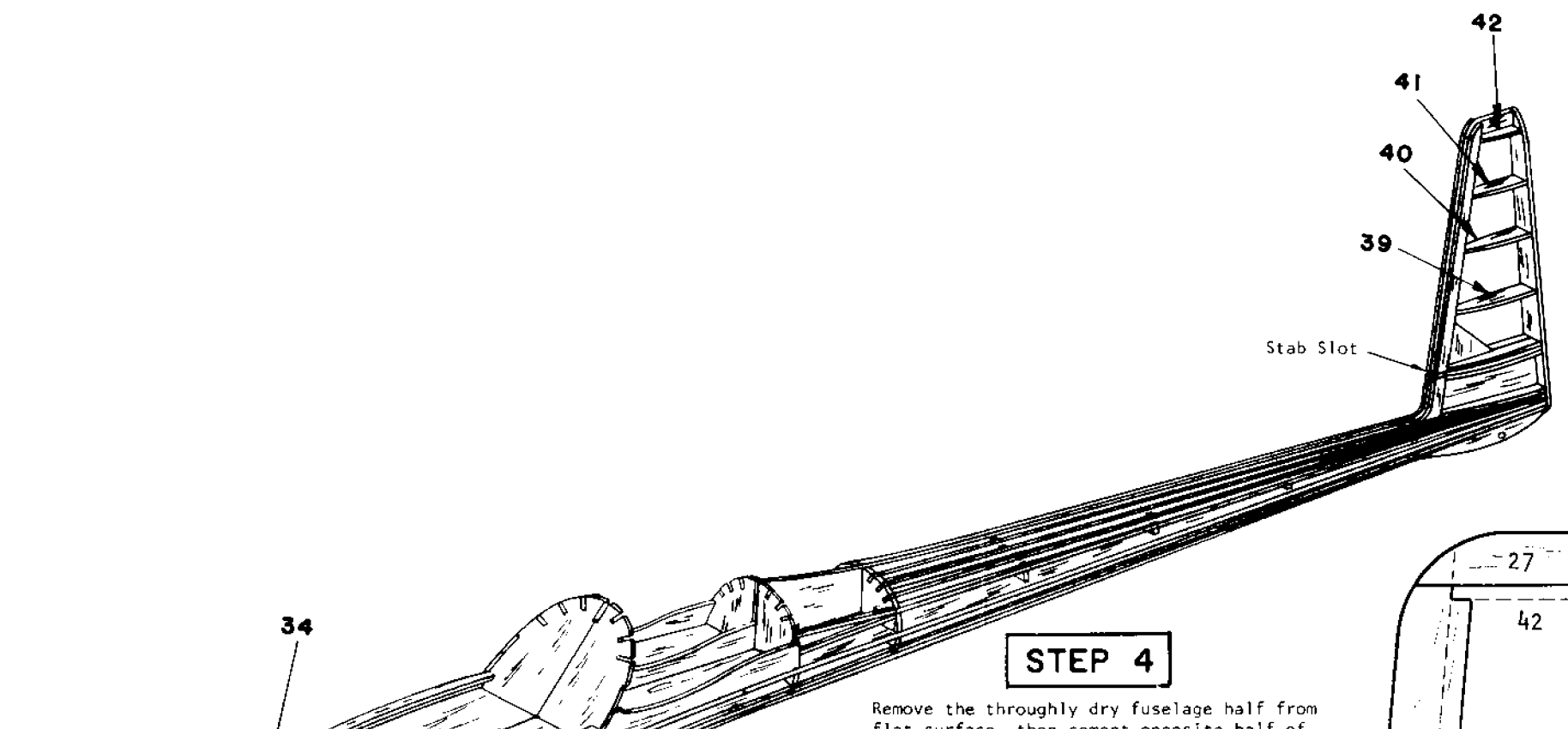
STEP 1
Saran Wrap (or similar kitchen plastic film) placed under the frame will prevent it from sticking to the plan. Fuselage is built on flat surface, directly on plan of fuselage. Pin frame assembly drawing. Use Saran Wrap, then pin fuselage parts #1, #2, & #3 in place; followed by Pin parts #25 thru #28 as shown. Assemble Side Keel by cementing #13's & #14's together as shown. Assemble Wheel Well stringer parts #21 & #22 in same manner.



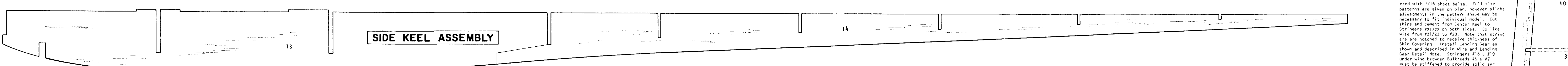
STEP 2
Cement Bulkhead halves #8 thru #12, vertically in place as shown. Side Keel is now cemented into notches. Note that Side Keel does not fit flush with outer edges of bulkheads, but extends beyond. Cement #23 to rear of Fuselage. Flush with bottom as shown. #24 is now cemented to, and flush with top of #23 so that it provides a triple layer and a space between workbench and #24 for the Tail Wheel which is inserted later.



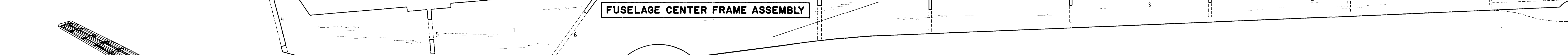
STEP 3
Cement Wing Saddle #16 into wide notches across bulkheads #6 & #7. Die-cut nose stringers #17 thru #22 are now cemented in place. #17 runs from bulkhead #4 to #6; remainder run from #4 to front of #8. Note that these stringers are flush with #4, #5 & #8, but extend past bulkheads at #5 & #6. Complete stringer installation by cementing 1/16 x 1/8 stringers into notches around bulkheads #8. Stringers run from bulkhead #8 to rear where they (beveled if necessary) fit against #28. Stringers should be soaked evenly and tapered together at rear as shown on sketch and full size side view. Note that stringers also extend past bulkheads. Cement #29 flush with front of #26. Note that it covers stab. slot. Cement Half Rib #31, #32, & #33 in place as shown on sketch and side view. Allow structure to dry thoroughly (overnight preferred) before removing fuselage half from flat surface to start next step.



STEP 4
Remove the thoroughly dry fuselage half from flat surface, then cement opposite half of bulkheads in place. (DO NOT MAKE ANOTHER FUSELAGE CENTER FRAME ASSEMBLY. BULKHEAD HALVES ARE CEMENTED TO THE SAME FUSELAGE FRAME THAT YOU HAVE REMOVED FROM THE FLAT SURFACE). Complete side in same manner as described in Steps #2 & #3. Cement rib #35 thru #42 in place in notches of leading edge. Line up Rear with plan to be sure Rib are in line. Cement bulkhead #34 into notches in Center Keel #1 and Side Keels #13. Note it leans forward at angle. Filler pieces #29 are now cemented between #17 and Side Keel from bulkhead #4 to #6. Bottom of fuselage, back to end of wheel well (at notches), are covered with 1/16 sheet balsa. Full size patterns are given on plan, however slight adjustments in the pattern shape may be necessary to fit individual model. Cut skins and cement from Center Keel to Stringers #21/22 on both sides. Do likewise from #21/22 to #20. Note that stringers are notched to receive thickness of skin covering. Install Landing Gear as shown and described in Wire and Landing Gear Detail Note. Stringers #18 & #19 under wing between Bulkheads #6 & #7 must be stiffened to provide solid surface for Hand Grip. 1/16 sheet balsa end grain (Grain running across from keel to stringer) is cemented in place, flush with outside of stringer to keel.

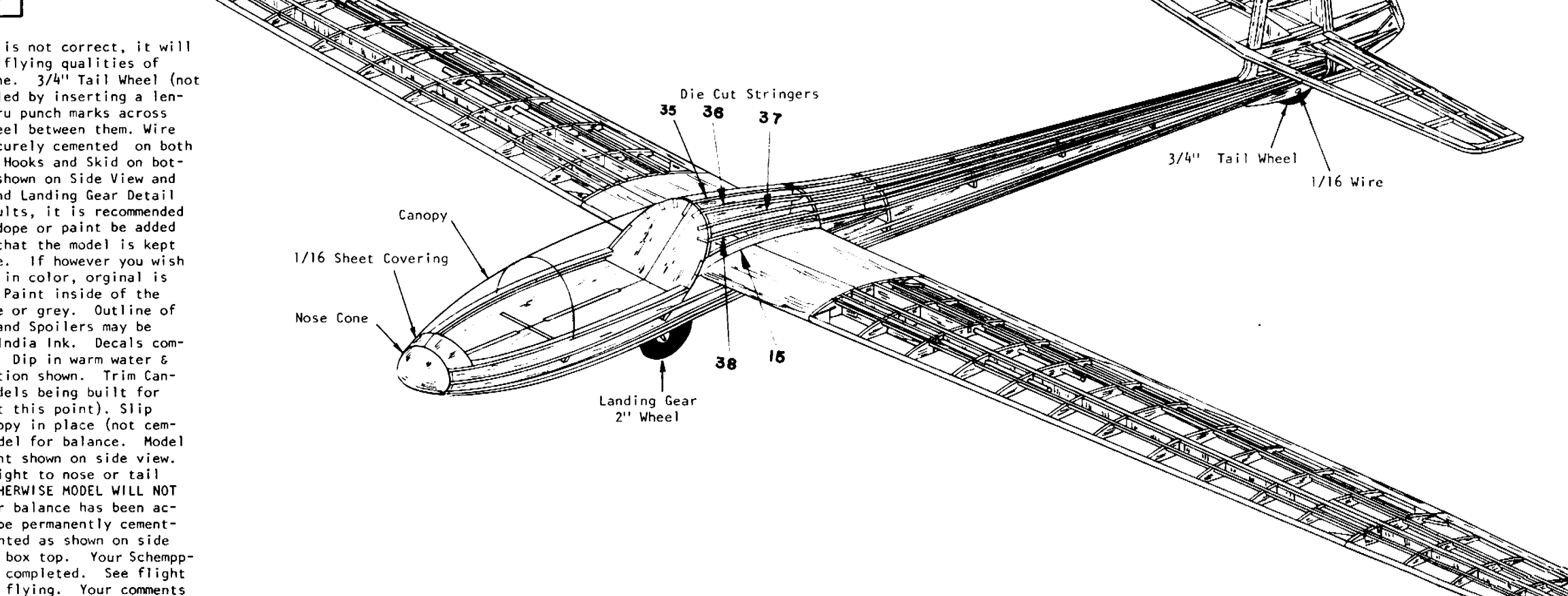


SKIN PATTERNS
Skin Patterns are full size, but may have to be adjusted to fit individual model as described in Step 4.

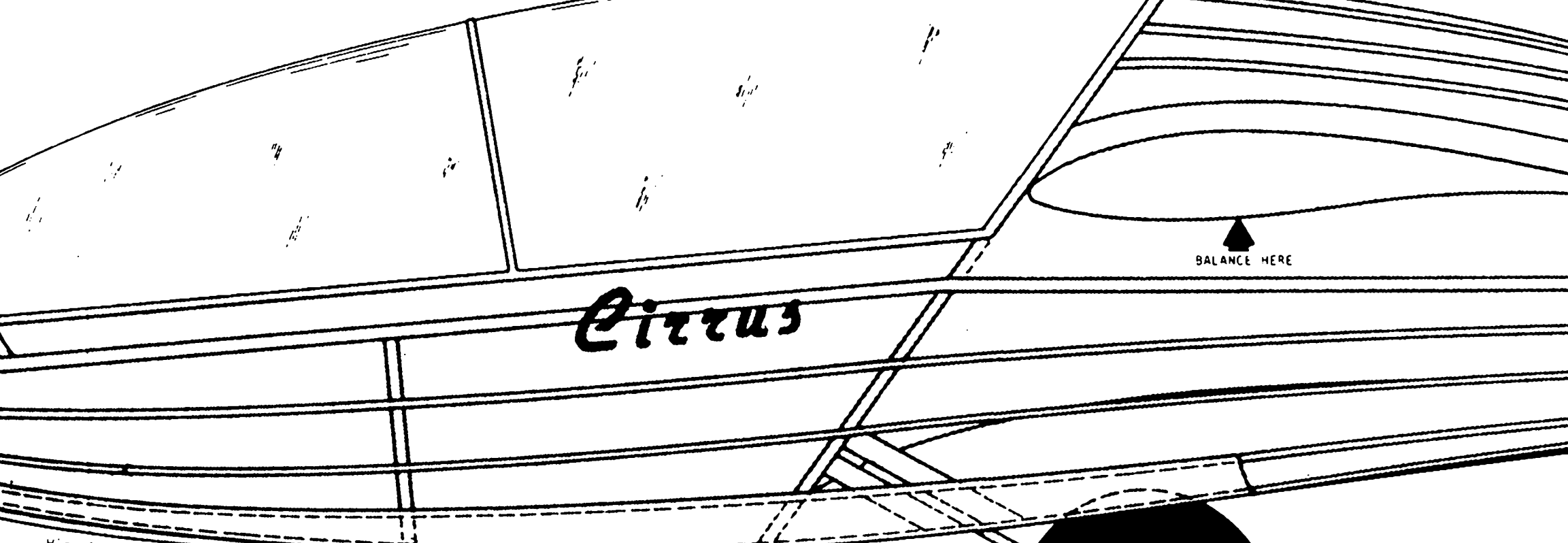


STEP 5 - FINAL ASSEMBLY

Although sketch shows assembled model uncovered, wing, fuselage, and tail surfaces (except rudder) must be covered before assembly is made unless R/C is being installed; in which case see R/C Note. Cement Nose Cone in place, then cover section immediately back of it with 1/16 sheet as shown. Completed Center Section is now cemented to top of Wing Saddle #16, between Bulkheads #6 & #7. Be certain it is pressed firmly down in place to insure proper angle of incidence (angle viewed from side). When dry, cement #15 in place followed by die-cut stringers #35 thru #38. Installation is same on both sides. Section is now covered with Silkspon Tissue. In order to prevent wrinkles it is best to cover from #6 to #7, then #7 to #8, each section in several pieces. Round off front of Rudder so that it can pivot. Rudder hinges are made from soft copper bell wire (not supplied). Cut three 3/4" lengths. Make pin holes at location shown on side view, then push wire through, keeping 1/16 between Rudder and Fin. Bend wire down inside of frame and cement securely. Rudder and Fin are now covered as described in Silkspon Note. Rudder slot which was cut out of #29's and Stabilizer is inserted and firmly cemented in place. Use cement generously and hold in place with pins. Before cement is dry, slip Wing panels onto Dowel Joints, then check that Wing and Stabilizer are level and in line with each other. Check by placing model on flat surface. When both Wing tips are equal distance from flat surface, the same must be true of the Stabilizer tips. If alignment is not correct, it will adversely affect the flying qualities of your Cirrus sailplane. 3/4" Tail Wheel (not supplied) is installed by inserting a length of 1/16 wire thru punch marks across #24's, capturing wheel between them. Wire is cut flush and securely cemented on both sides. Install Tow Hook and Skid on bottom of fuselage as shown on Side View and described in wire and Landing Gear Detail Note. For best results, it is recommended that no additional dope or paint be added to your Cirrus, so that the model is kept as light as possible. If however you wish to finish your model in color, original is painted all white. Paint inside of the Cockpit either white or gray. Outline of elevator, Ailerons and Spoilers may be drawn with pen and India Ink. Detail complete paint scheme. Dip in warm water & slide off into position shown. Trim Canopy to fit. (For models being built for R/C, see R/C Note at this point). Slip wing panels and canopy in place (not cemented) and check model for balance. Model MUST balance at point shown on side view. If necessary add weight to nose or tail to achieve this. OTHERWISE MODEL WILL NOT FLY PROPERLY. After balance has been achieved, Canopy can be permanently cemented in place and painted as shown on side view and full color box top. Your Schemp-Hirth Cirrus is now completed. See Flight Instructions before flying. Your comments are welcome. Write to Sterling Models, Inc. Bedford, Mass., 15144 USA. GOOD LUCK! HAPPY LANDING!



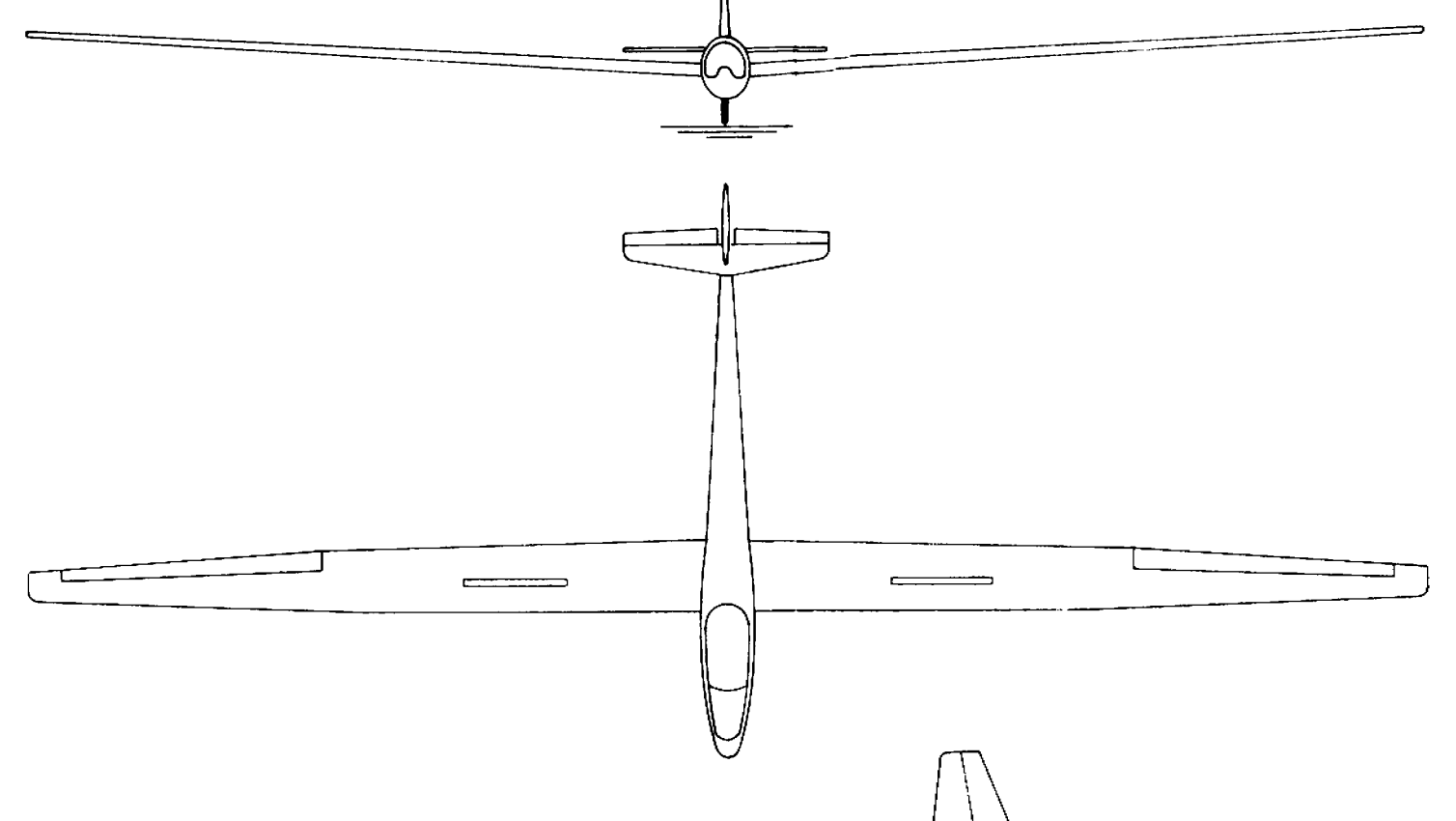
WIRE AND LANDING GEAR DETAIL
Drawings for wire parts are full size. Wire Skid/Tow Hook as well as the two rear Tow Hooks are bent from 1/16 wire. Install by making hole in Center Keel at location shown and cement securely in place. Use cement generously. Landing Gear is bent from 3/32 wire. Make the first bend, slip on wheel (wheel not supplied, purchase separately), then make second bend at point shown, bending wire up to dotted position. U shape fits snugly over both #22's. Make hole in 1/16 sheet covering and insert landing gear at angle position shown on side view. Secure by pouring cement generously over wire, then place scrap 3/16 square in front and back of wire using cement generously. Allow to dry thoroughly being sure that angle is maintained and that wheel has clearance shown to rotate freely. Gear is shown in Landing Position. Full size craft had retractable wheel and closing wheel well cover. This has been eliminated on the model since landings would tend to break scale cover off.



OUR THANKS TO:
Date Willoughby, whose wonderful cooperation in securing the Plans and snapshots of the full size Cirrus, is gratefully acknowledged.

RADIO CONTROL INSTALLATION

Wing area of your Cirrus is 300 sq. inches and weighs with approximately 5 coats of clear and 2 coats of white dope, 12 oz. Weight of radio equipment therefore is limited. It is suggested therefore, that you check with your hobby dealer for light type of equipment or write directly to the manufacturers of radio equipment. You will find their advertisements in the various model magazines. Equipment for radio installation is not included in kit. It is recommended that the Rudder be mounted with Pin type hinges for absolutely free movement and the rest of the installation, as required, should be made following the radio control equipment manufacturer's instructions. Mount equipment in Cockpit area, so that model balances at point shown in side view. THIS IS A MUST. Add weight to front or rear, if necessary, in order to achieve this. Do not cover the fuselage until provisions have been made for the installation of the R/C equipment. See Flight Instructions before flying. Canopy must be removable for access to R/C equipment. After trimming Canopy to fit, hold in place with transparent Scotch Tape or tiny screws into the hardwood blocks which must be cemented into the fuselage to receive them. Be certain R/C controls work freely. Equipment should be tested before each flight. GOOD LUCK and HAPPY LANDINGS!



Facts about the Schemp-Hirth Cirrus Sailplane

SCHEMP-HIRTH CIRRUS
U.S. Agent: Motorless Flight Enterprises
125 Farmstead Lane
Glastonbury, Conn. 06033

SPECIFICATIONS

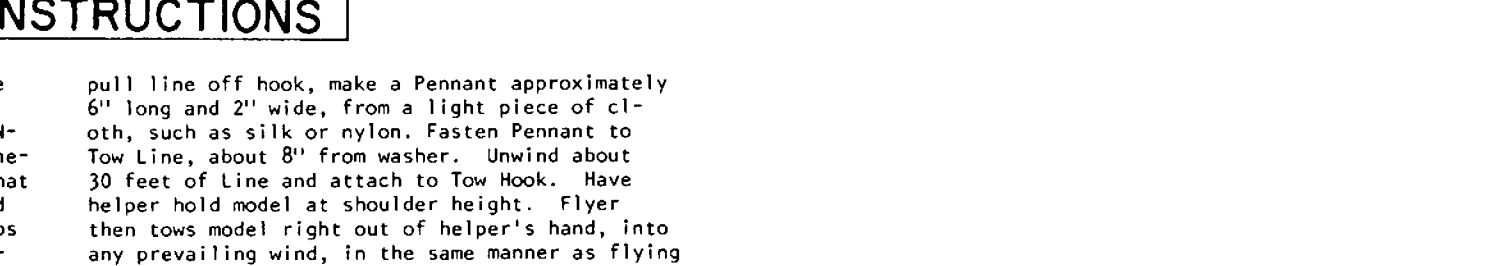
Span	58 2/3"
Area	135.4 sq. ft.
Aspect ratio	25
Airfoil	special Wortmann
Empty weight	273 lb.
Payload	309 lb.
Gross weight	582 lb.
Wing loading	(014 lb./sq. ft. with water)
Structure	fiberglass monocoque fuselage, fiberglass/foam plastic sandwich wings and tail.

PERFORMANCE

L/D max	44 @ 53 mph
Min. sink	1.44 fpm @ 45 mph
6-fps sink	103 mph

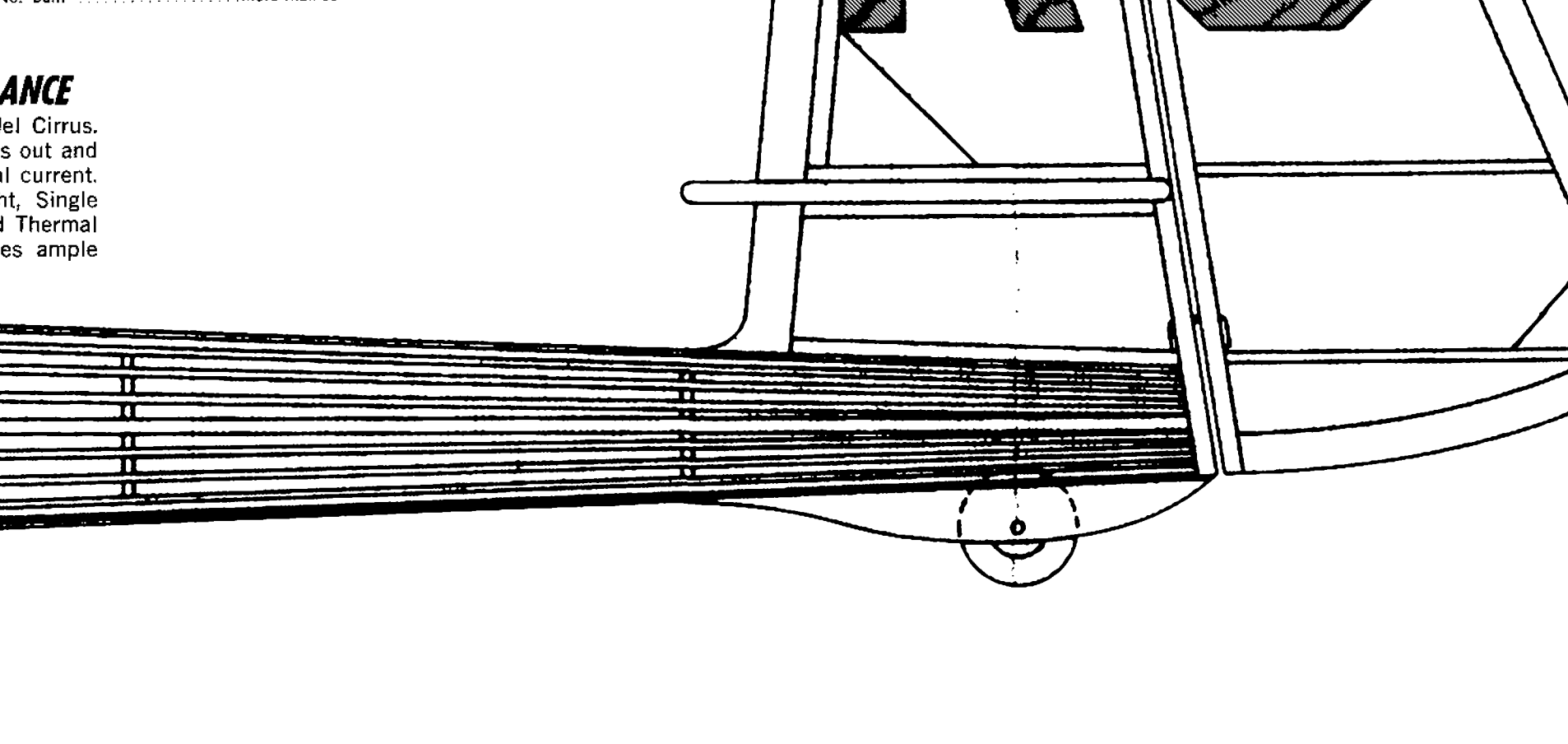
OTHER
Designer: Klaus Holighaus
No. built: more than 50

GREAT FLIGHT PERFORMANCE
A real soaring machine is this model Cirrus. Eiffel 400 soaring wing section seeks out and takes full advantage of every thermal current. Can be flown Tow Line-Free Flight, Single Channel or pulse R/C for Slope and Thermal Soaring. Large Cockpit area provides ample room for R/C Equipment.



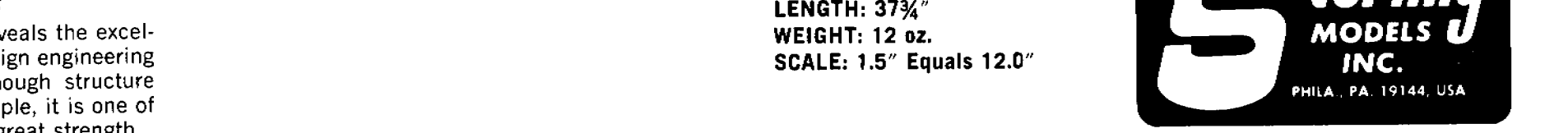
FLIGHT INSTRUCTIONS
When model has been completed, it must balance at point shown on Side View, with or without R/C equipment. DO NOT ATTEMPT TO FLY MODEL UNTIL BALANCE HAS BEEN ACHIEVED; add weight if necessary. Check Wing and Tail to be certain they are in line with each other, as described in Final Assembly, and also check that no warps have developed. If any surface has warps, remove using the steam method described in the Silkspon Note. Pick a calm day for test flying. Hand launch test flights should be made before tow operations are attempted. Holding model under front of wing, launch gently into any prevailing wind, slightly nose down, to a point on the ground approximately 25 feet above you. Model should descend in a smooth, gradual downward flight path. If model stalls, add weight to Nose; if it dives, add weight to Tail, until smooth glide path is achieved. If model veers in opposite direction, until a straight-line, smooth flight is achieved. To make a low line (material is not supplied in kit), secure a spool of string. Tie a small washer onto the end of the string. For the dual purpose of being able to see the Tow Line release from Hook, and also to cause the wind resistance to help pull line off hook, make a Pennant approximately 6" long and 2" wide, from a light piece of cloth, such as silk or nylon. Fasten Pennant to Tow Line, about 8" from washer. Unwind about 30 feet of line and attach to Tow Hook. Have helper hold model at shoulder height. Flyer then tosses model right out of helper's hand, into any prevailing wind, in the same manner as flying a kite. Glider should ascend in a smooth straight flight path. When maximum height has been achieved, slacken line and it will drop off hook. If model veers to one side or the other during tow, adjustments should be made by bending Rudder in opposite direction. Length of Tow Line is optional, according to the flyer and weather conditions. Under favorable wind condition, it is possible to use as high as 100 feet of Tow Line. Best performance would have the glider turning in circles of approximately 100 to 200 feet diameter. Testing and flying of R/C equipped model is similar. It is highly recommended that a good site be found, since a flat field usually offers no real thermal gliding conditions. Usually a slightly hilly area is more conducive to better glider flying. GOOD LUCK and GOOD FLYING!!!!!!

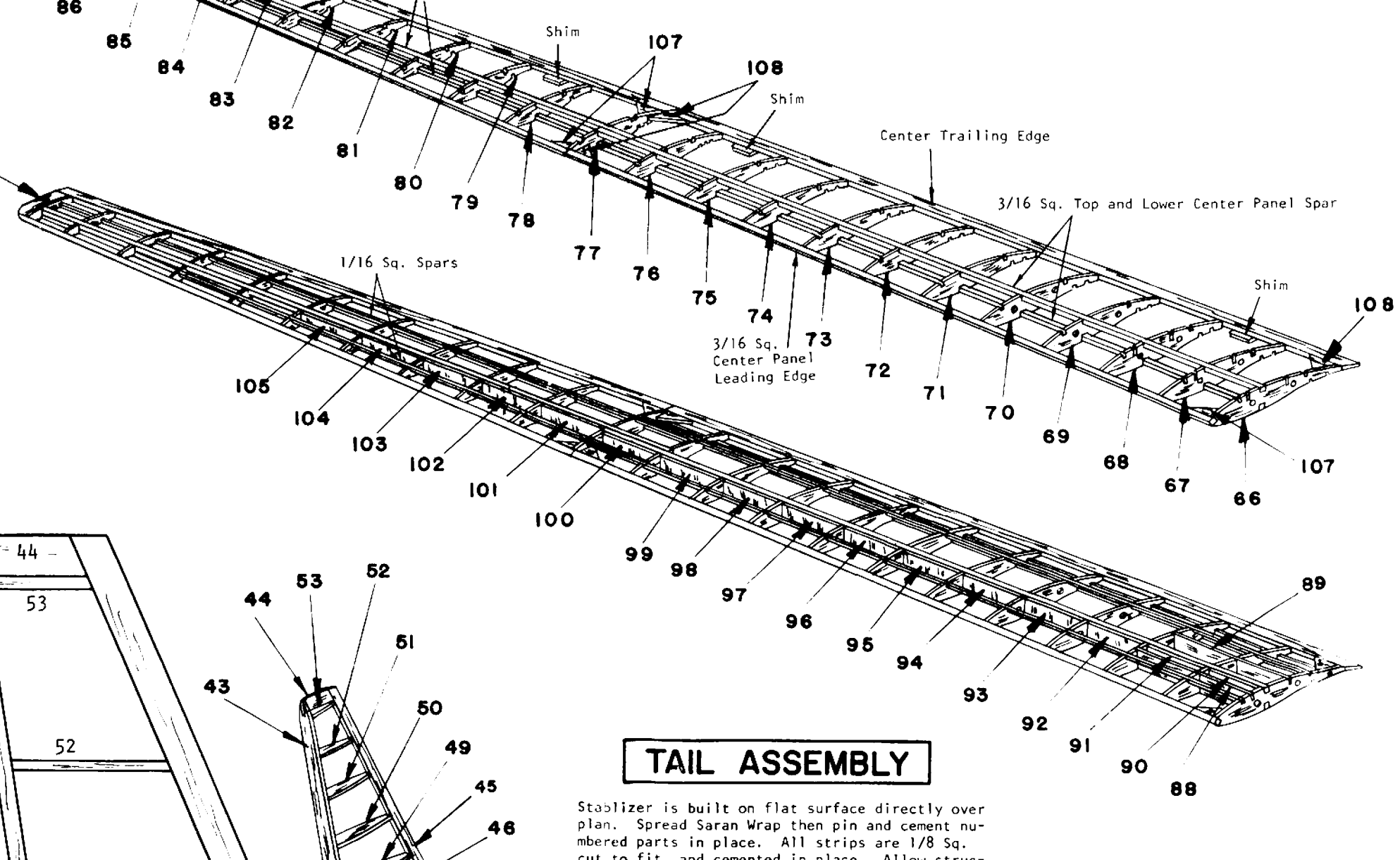
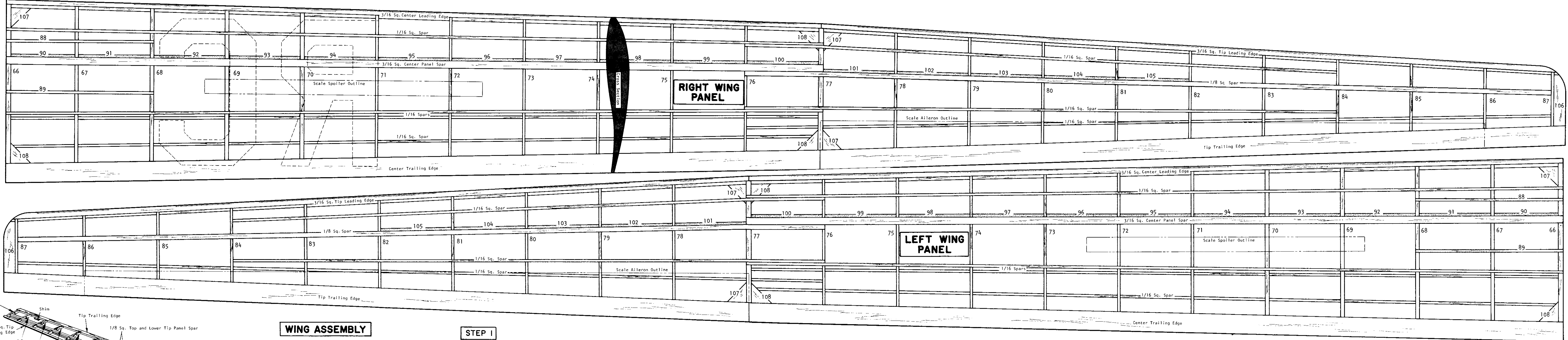
STRUCTURE
Frame Photo reveals the excellence of the design engineering of the kit. Although structure is relatively simple, it is one of fine detail and great strength.



beautiful Cirrus

SPAN: 87 7/8"
LENGTH: 37 1/2"
WEIGHT: 12 oz.
SCALE: 1.5" Equals 12.0"





WING ASSEMBLY

STEP 1

Ribs #66 thru #70 (2 of each) have punch marks thru which 3/16 holes are drilled. Start hole with 1/16, then 1/8, and finish with 3/16 drill; to be sure hole is round and clean to receive the 3/16 Dowel Wing Joiners. Build wing directly over plan. Spread Saran Wrap then pin 3/16 Sq. Lower center-panel Spar, followed by 1/8 Sq. Lower Tip-panel Spar. Note they are cemented together between ribs #76 and #77 as they are pinned in place. Cement ribs #66 thru #87 in place as shown, then cement top 3/16 Sq. Center-panel Spar and 1/8 Sq. Tip Panel Spar in place in notches; again cementing then between ribs #76 & #77. Cement Trailing Edge section against back of ribs. Front of Trailing Edge must be raised up with 1/16 Strips (Shims) as shown, so that angle will fit curve of ribs. Rear of Trailing Edge rest on flat surface. Center and Tip Trailing Edges are butted and cemented together at rib #77. Cement 3/16 Sq. Leading Edges to front of ribs as shown, joining at rib #77. Cement triangular gussets #107's & #108's into corners of panels as shown on sketch and full size drawings.

STEP 2

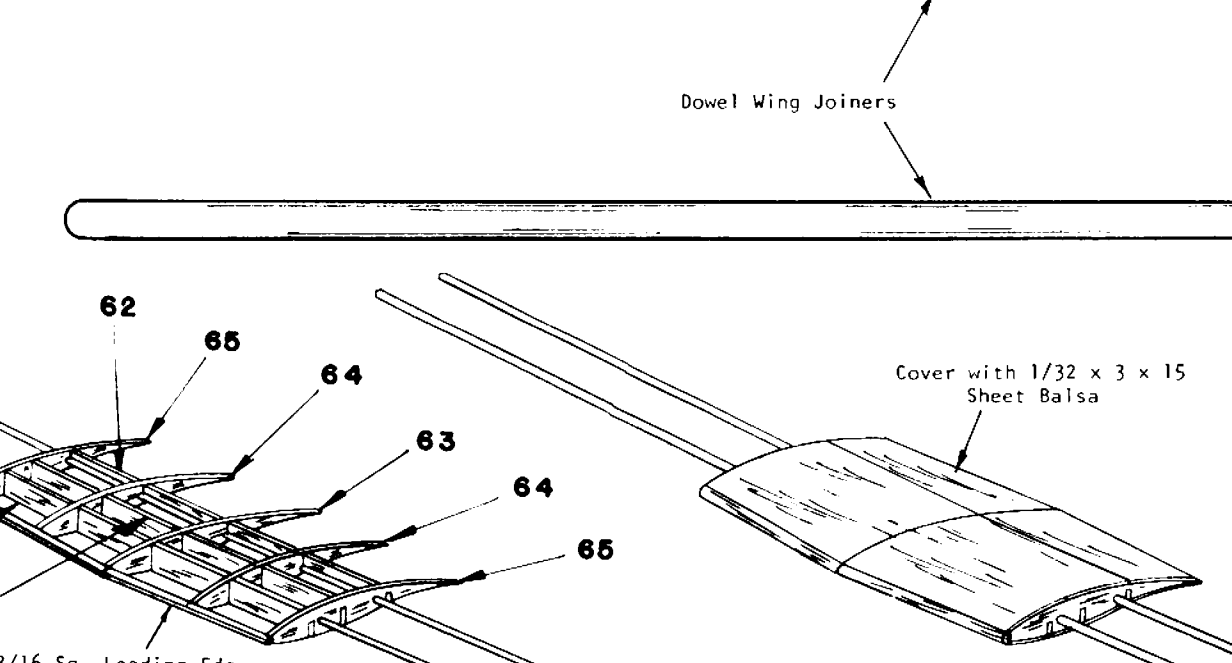
Cement wing tip #106 against rib #87, centered between Leading and Trailing Edges. Cement rib supports #88 & #89 between ribs #66 thru #88 as shown in sketch and full size drawings. Cement di-cut vertical webs (by the number shown) to front of top & bottom spars. Because wire tapers, so do webs. End marks C faces away from tip so tapered web is installed properly. Cement the front & rear 1/16 Sq. Top Spars into notches in ribs as shown. Allow structure to dry thoroughly (overnight recommended) before removing from flat surface, then remove and cement the two 1/16 Sq. bottom spars to center panel and the one 1/16 Sq. spar to the tip panel. After bottom 1/16 Sq. spars are in place, frame should again be pinned down on flat surface until cement is thoroughly dry to prevent warping. Opposite Wing Panel is built in same manner.

STEP 3

Assemble center section by drilling 1/16 holes (only) through punch marks in ribs #63, #64's & #65's. Start assembly by pinning down one side of di-cut spars #60 & #61 to top of full size drawing. Cement ribs into notches as shown and add 3/16 Sq. Leading Edge and allow assembly to dry thoroughly. When dry, remove from flat surface and cement di-cut spar #62 in place from bottom. Allow to dry thoroughly making sure that no twist has developed. 1/16 holes drilled into ribs are now enlarged to 3/16. Round off one end of each of the four 3/16 x 11-7/8 Dowel Wing Joiners and insert opposite into 3/16 holes joining at center rib. Cement securely in place against spars and ribs. Check angle of Dowel with front view drawings. Allow to dry then cover top & bottom of center section using 1/32 x 3 x 15 Sheet Balsa, seams joining over #62 and center rib as shown. Trim flush with outer ribs. Center section is ready to be installed as described in final assembly.



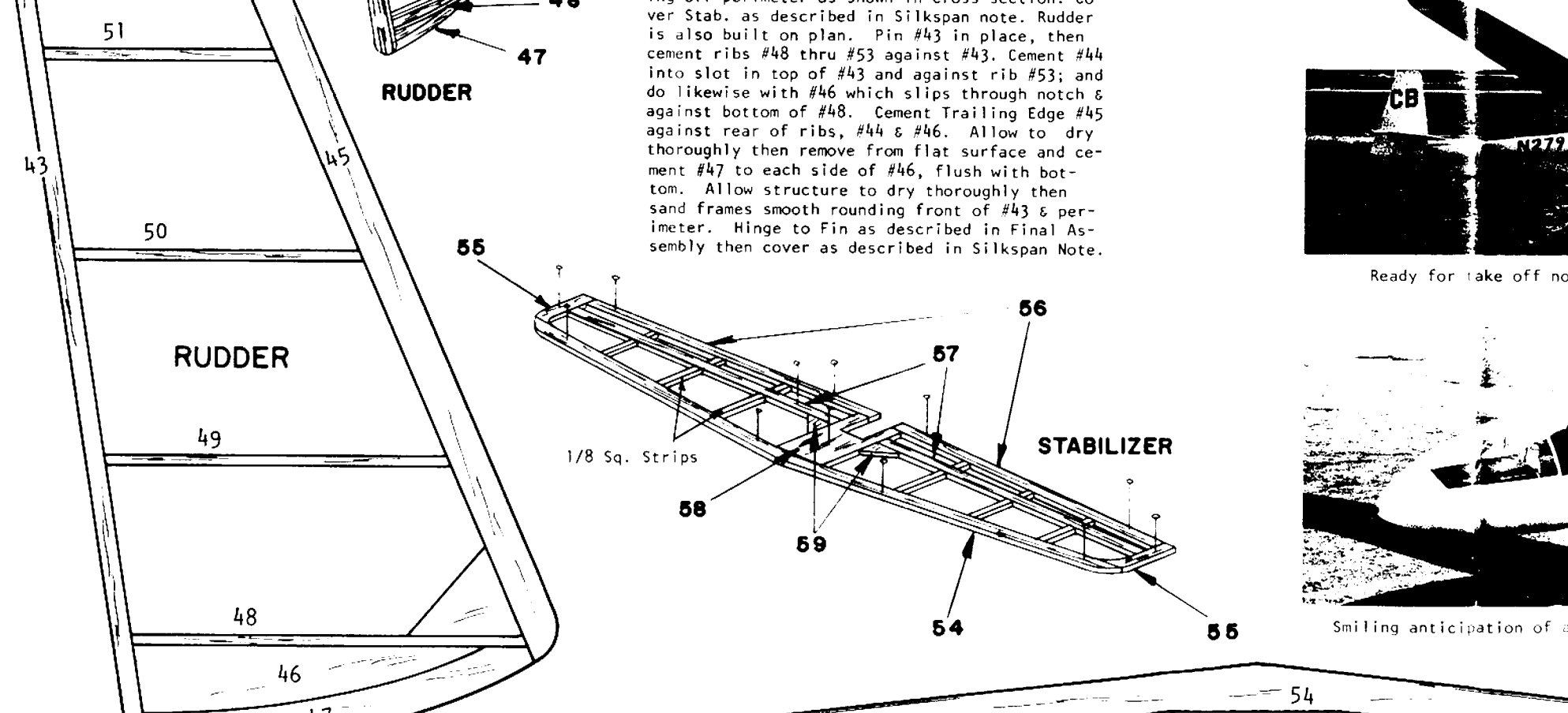
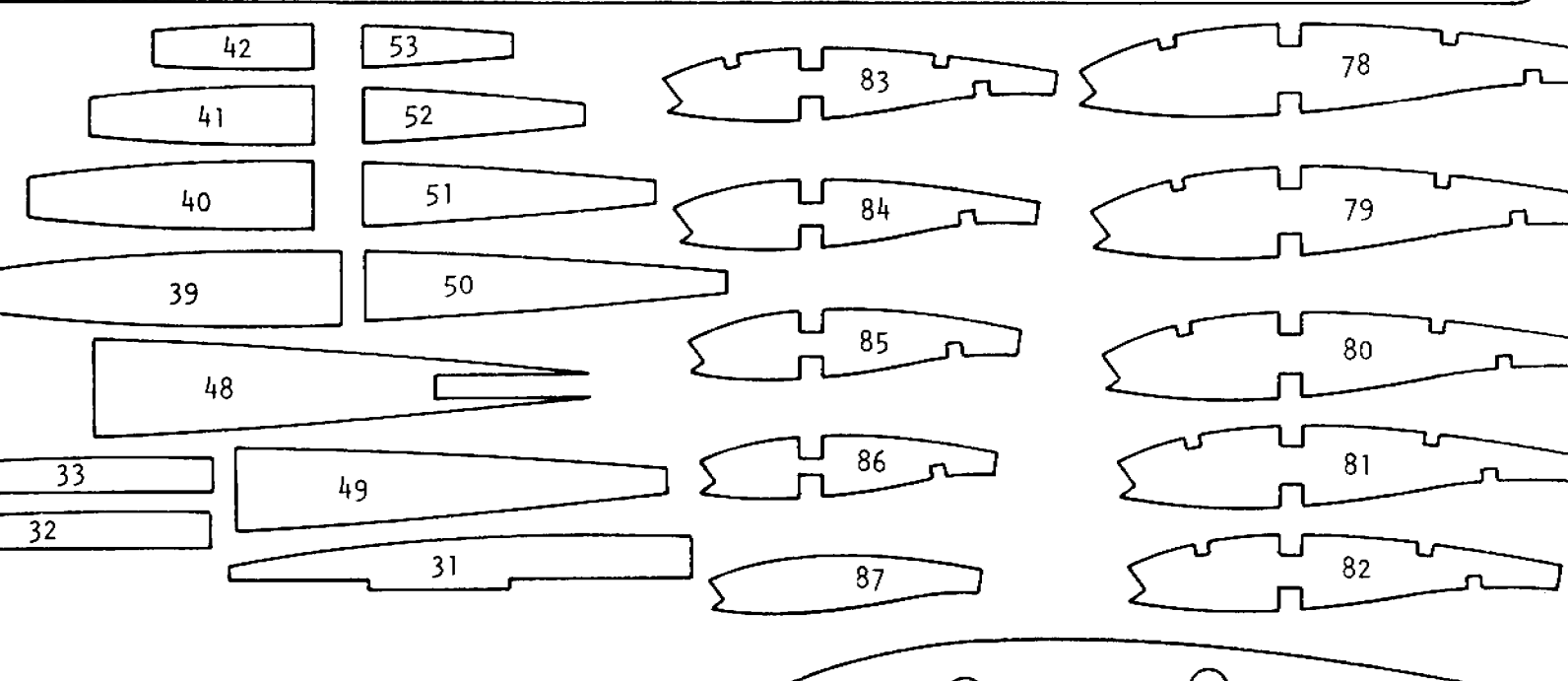
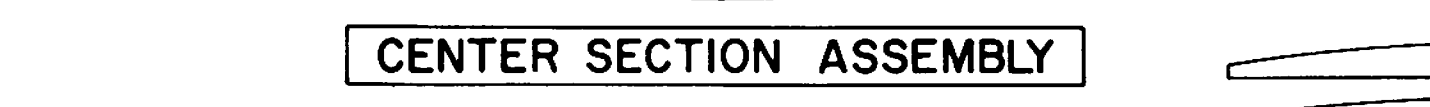
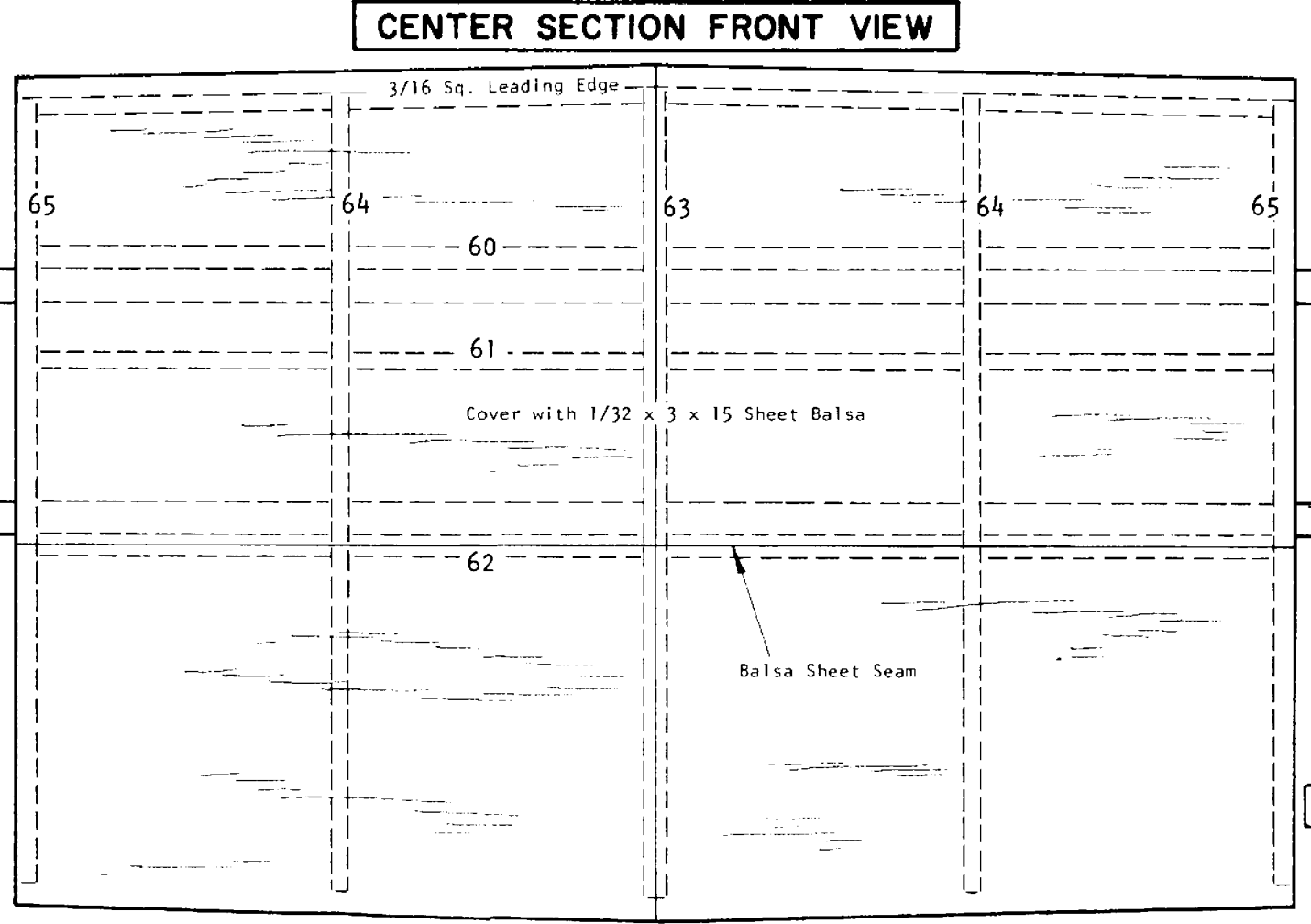
...and here's how the Canopy goes in place.



SILKSPAN TISSUE COVERING

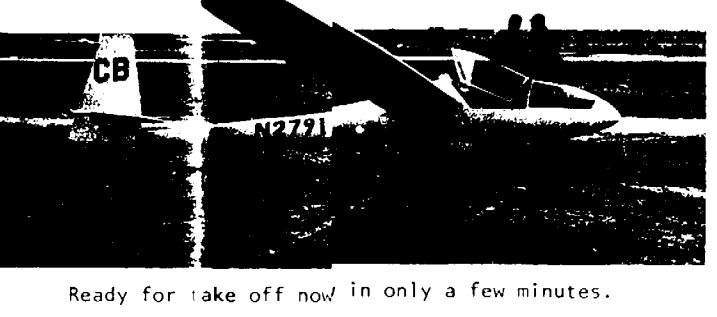
The finest grade wet strength Silkspan Tissue provided in this kit, permits covering of most compound curves without wrinkling. WHEN MIXED WITH WATER BEFORE APPLYING TO FRAME, although tissue packed in kit may be wrinkled, these wrinkles all come out when tissue (after being cut to pattern size) is placed on flat surface and thoroughly moistened with water. Tissue shrinks (when dry) to tight smooth surface. Use clear dope to attach tissue to frame as follows: Apply a coat of dope to the outside edges of the area to be covered. When dry, cut tissue to shape needed, about 1/4 oversize. Pin tissue on flat surface and dampen with water-moistened cloth by dabbing. Apply a second coat of clear dope to the outer edges of the frame, then place moistened tissue on frame. Pull tissue GENTLY WITH FINGERS working out all wrinkles. WHEN COVERING WING AND TAIL SURFACES, PIN FRAMEWORK TO FLAT SURFACE TO PREVENT FRAME FROM WARPING AS TISSUE DRIES. Any area that wrinkles can be recovered by stretching out area (bounded by nearest framework) and then recovering in same manner. COVER WING FIRST: Cover top of center section first in two pieces, joining pieces in center. Bottom is covered in same manner being certain to apply dope to entire Bottom Panel, so that tissue adheres to Airfoil curve. Top of wing is covered in two pieces. First section from Rib #66 to Rib #77 and second section from Rib #77 to Tip. Bottom is covered in same manner, except that the rear portion of Ribs that

has the reverse curve (under Camber) must also be coated with clear dope so that tissue adheres to it and follows the curve. COVER TAIL SURFACES NEXT: Hinge Rudder & Fin as described in final assembly or R/C detail, then cover each side of Rudder and Fin and also top and bottom of stabilizer with one piece for each side. COVER FUSELAGE NEXT: Fuselage from PB to rear is a straight taper which allows covering of each half with one piece, Fairing tissue into bottom of Fin. Be careful to allow first side to dry thoroughly. When trimming covering on second side be careful to use a sharp Razor & Trim tissue right in the center of the Center Keel. Fuselage front is a series of compound curves and must be covered in small sections to avoid wrinkling. Original model was covered 2 stringer widths at a time, from front to bulkhead PB. Care must be taken to avoid wrinkles. Section over wing is constructed and covered as described in Final Assembly Note. After the tissue covering is complete, apply 3 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 require 2 additional coats of straight dope to fill pores before color was applied. Check Wings and Tail Surfaces, 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

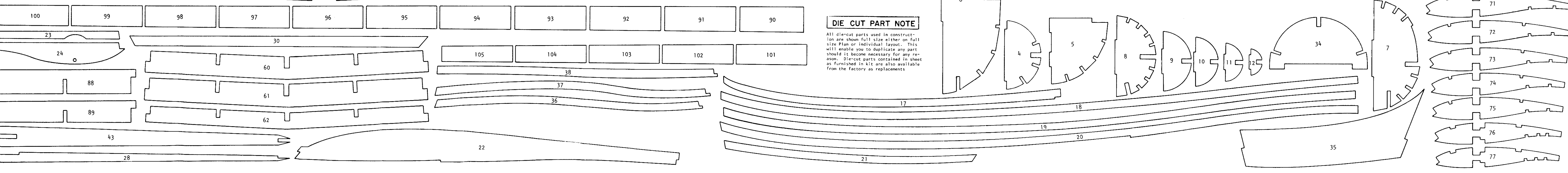
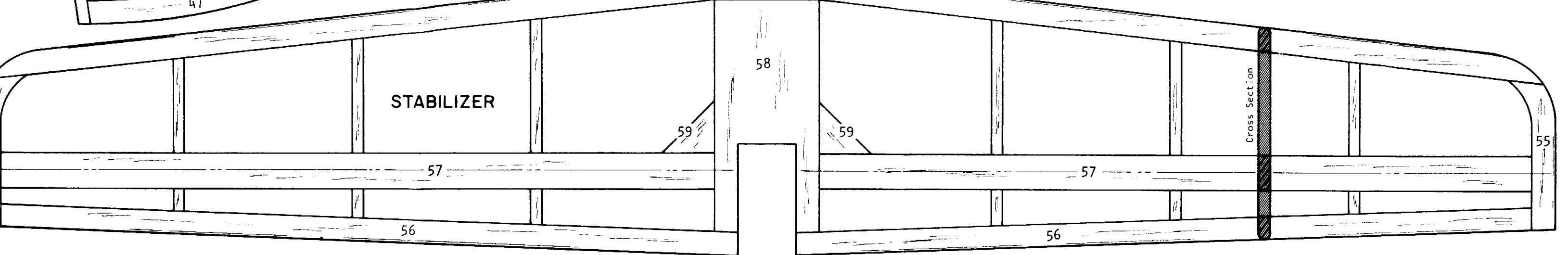
Stabilizer is built on flat surface directly over plan. Spread Saran Wrap then pin and cement numbered parts in place. All strips are 1/8 Sq. cut to fit, and cemented in place. Allow structure to dry thoroughly then sand smooth, rounding off perimeter as shown in cross section. Cover Stab, as described in Silkspan note. Rudder is also built on plan. Pin #43 in place, then cement ribs #48 thru #53 against #43. Cement #44 into slot in top of #43 and against rib #53; do likewise with #46 which slips through notch & against bottom of #58. Cement Trailing Edge #45 against rear of ribs, #44 & #46. Allow to dry, thoroughly then remove from flat surface and cement #47 to each side of #46, flush with bottom. Allow structure to dry thoroughly then sand frames smooth rounding front of #43 & perimeter. Hinge to Fin as described in Final Assembly then cover as described in Silkspan Note.



Ready for take off now in only a few minutes.

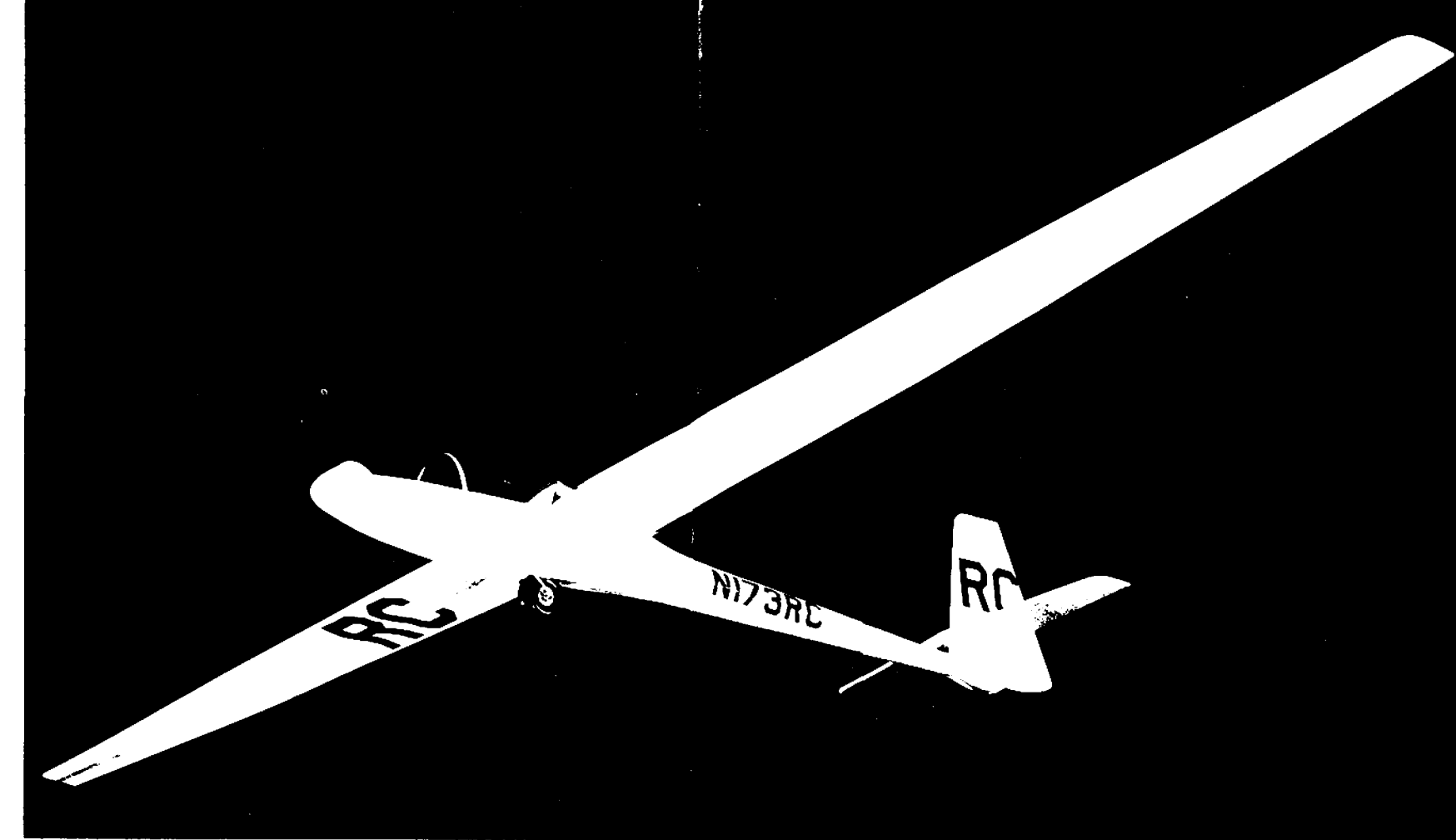


Smiling anticipation of a beautiful and smooth flight.



DIE CUT PART NOTE

All die-cut parts used in construction are shown 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.



With a wing span of over 7 feet, our model Cirrus captures all the grace and beauty of the big one.



Pilot in place, Canopy going on.



... and here's the pilot, comparison shows size of Cirrus.



Great forward shot of cockpit interior.



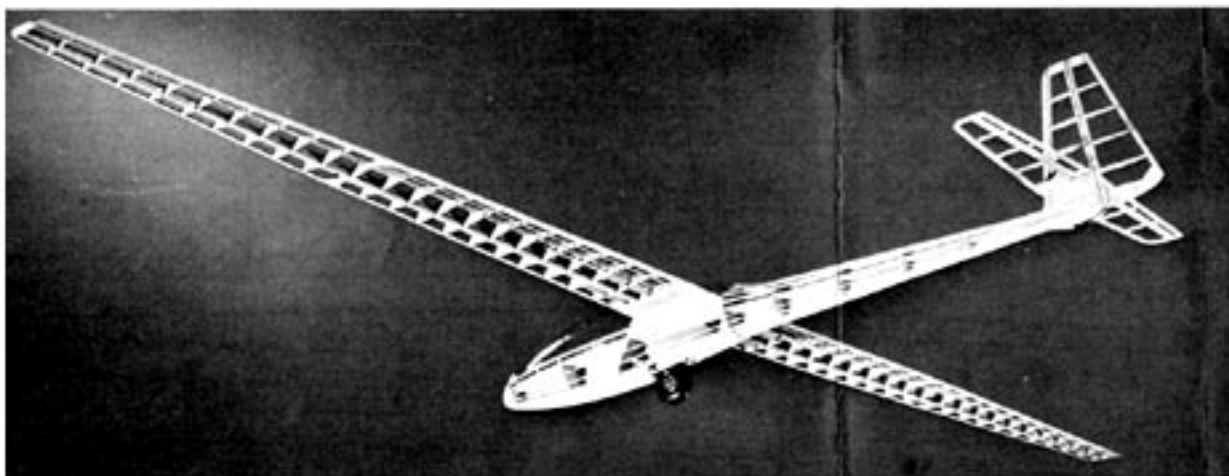
...and here is a good shot of the rear end



And here's the rear of the cockpit area, canopy removed.



Cirrus on the line. Note Schweizer 2-32 in background.



STRUCTURE

Frame Photo reveals the excellence of the design engineering of the kit. Although structure is relatively simple, it is one of fine detail and great strength.