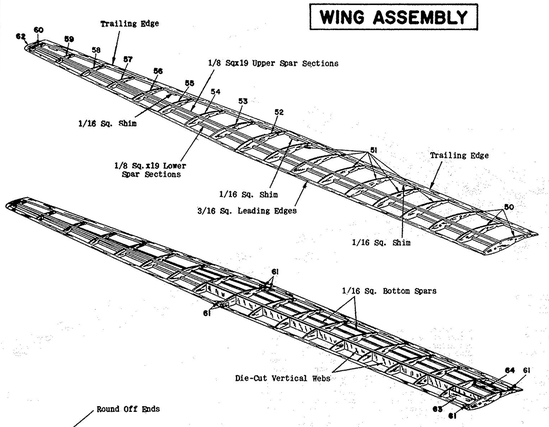
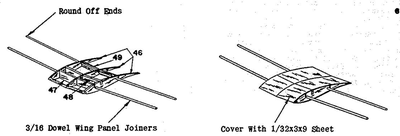
WING ASSEMBLY





STEP 1

Drill holes in all six #50 Ribs. Start with 1/16 hole through punch marks, followed by 1/8", and finally a 3/16" drill to receive the 3/16" Dowel Wing Joiners. Build Wing over Plan. Pin down Lower Spar, consisting of two 1/8" sq.x19" sections, butted and cemented together at Rib #52 location. Cut to proper length. Cement Rib #59's thru #60 in place as shown, then cement Upper 1/8" sq. Spar in place in same manner. Cement Trailing Edge sections against back of Ribs. Front of Trailing Edge must be raised up with 1/16" strips as shown, so that angle will fit curve of Ribs. Rear rests on flat surface. Cement Tip Trailing Edge in place in same manner, butting and cementing together at Rib #52. Cement 3/16" sq. Leading Edges to front of Ribs as shown, joining at Rib #52. Cement Wing Tip #62 against #60, centered between Leading and Trailing Edges.

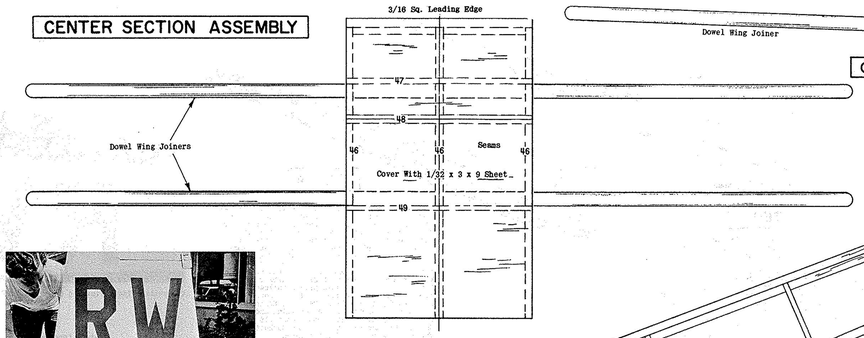
STEP 2

Cement triangular Gussetts #61's into corners formed at front and rear of outer Rib #50. And on both sides of #52, front and rear. Cement Rib supports #63 & #64 between Ribs #50's as shown in sketch and top view. Cement die-cut vertical Webs to front of 1/8" sq. top and bottom Spars from Ribs #50's to #53 as shown. Wing panels must dry thoroughly, then they are removed and 1/16" sq. Bottom Spars are cemented into notches. Frame is sanded smooth to prepare for tissue covering as described in Silkspan note. Opposite panel is built in same manner.

STEP 3

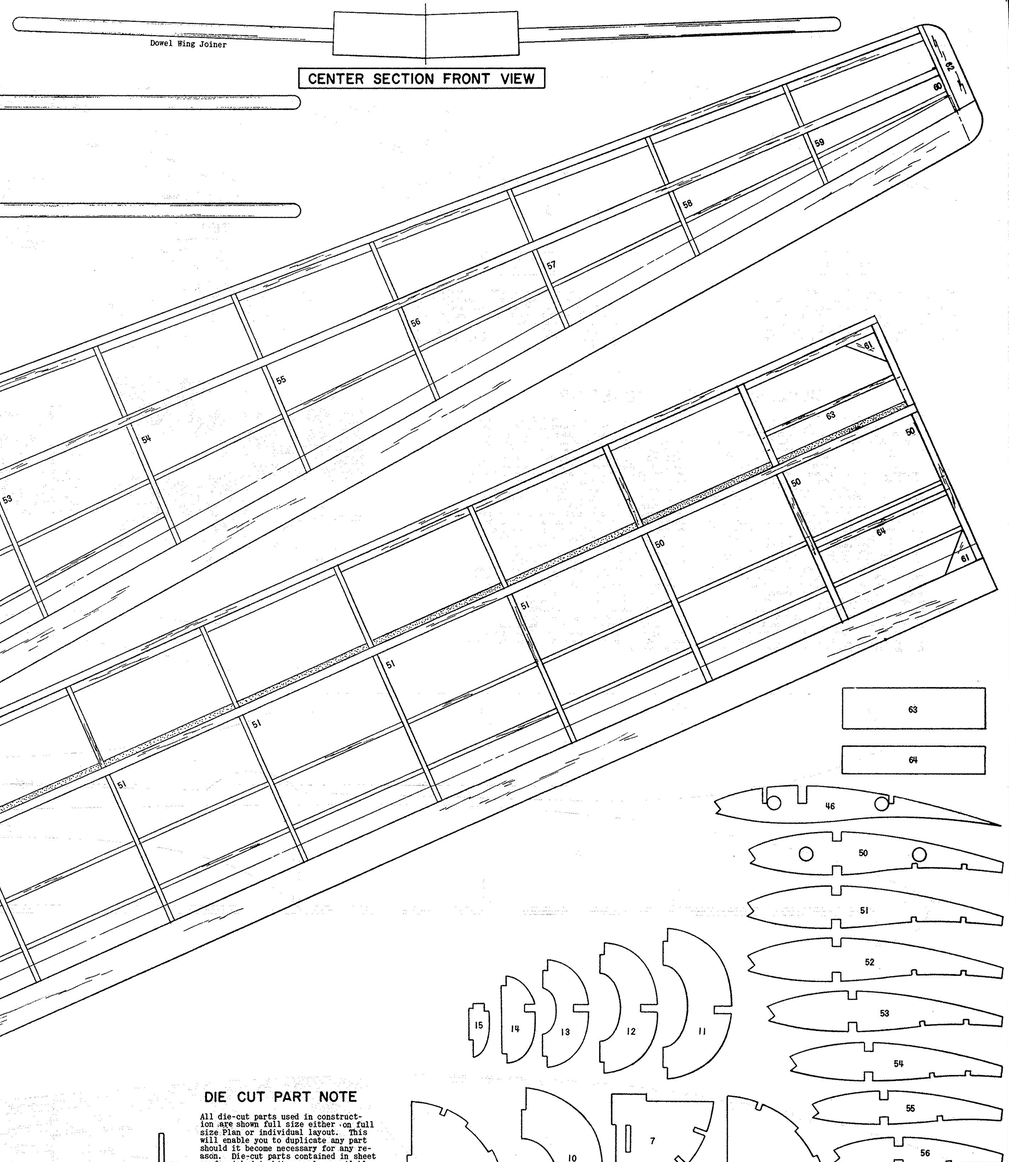
Drill 1/16" holes through punch marks in the three #46 Ribs. Cement Center Spar Plates #47, #48 & #49 into notch in center Rib, then add the two end #46 Ribs. Be certain both end Ribs fit tightly against Spar Plates, so that the Rib angles in for proper dihedral. Check alignment over full size Plan and allow to dry thoroughly Cement the short pieces of 3/16" sq. Leading Edge sections (cut offs from outer panels) to front of Ribs, joining in center. When dry, cut flush with outer Ribs. 1/16" pilot holes drilled into the Ribs are now enlarged to 3/16". 3/16"x11-7/8" Dowel are cut in half evenly to form four Wing Panel Joiners. Round off one end, then insert opposite end into 3/16" holes, joining at Center Rib. Cement securely in place against Spar Webs and Ribs. Check angle with front view drawing, cover top and bottom of Center section , using 1/32x3x9 sheet Balsa, seams joining over #48 and Center Rib as shown. Trim flush with Outer Ribs. Center section is ready to be installed as described in Final Assembly.

CENTER SECTION ASSEMBLY

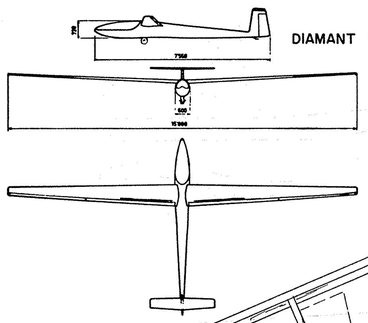


Competition Identification on Rudder

CENTER SECTION FRONT VIEW



DIAMANT SAILPLANE SPECIFICATIONS



Technical data

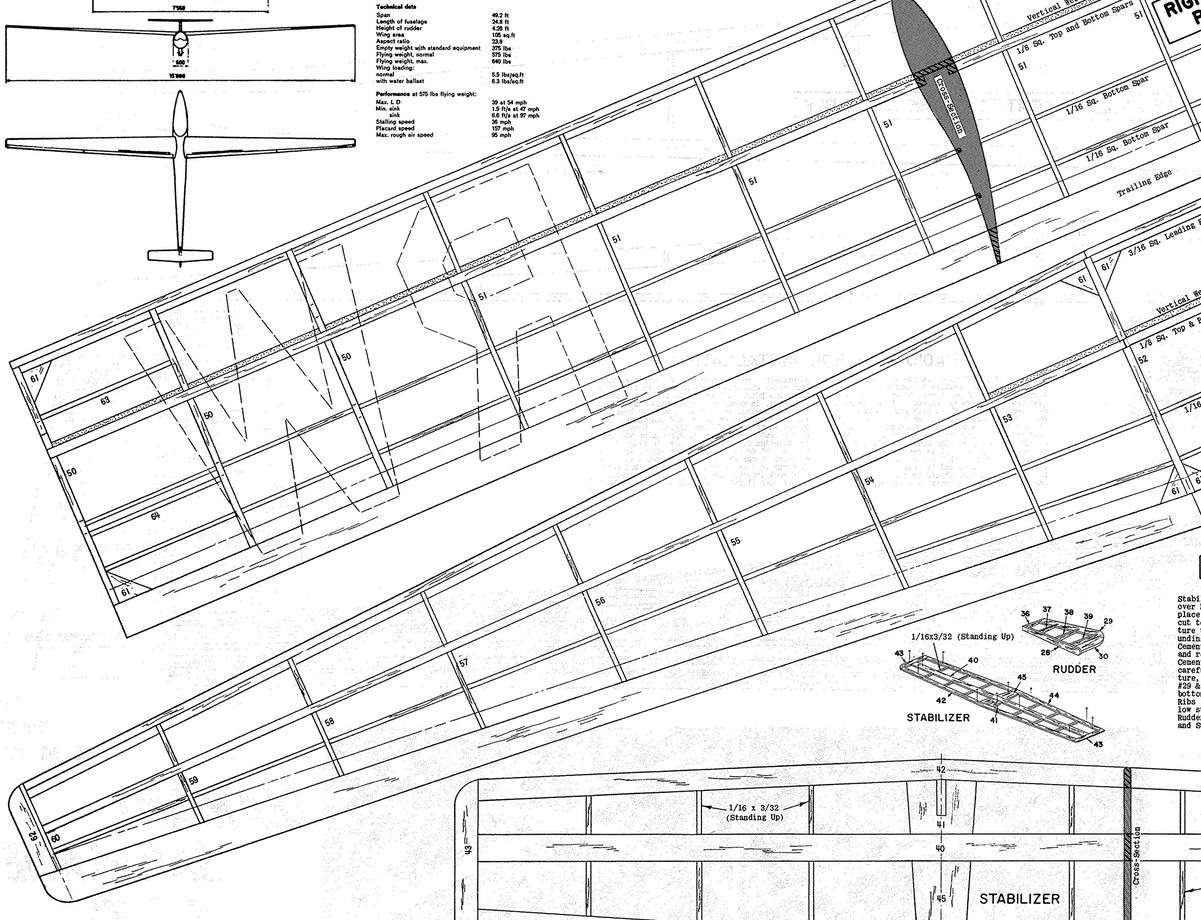
Span	49.2 ft
Length of fuselage	24.8 ft
Height of rudder	4.26 ft
Wing area	105 sq.ft
Aspect ratio	23.8
Flying weight with standard equipment	375 lbs
Flying weight, normal	595 lbs
Flying weight, max.	640 lbs
Wing loading:	
normal	5.5 lbs/sq.ft
with water ballast	6.3 lbs/sq.ft

Performance at 575 lbs flying weight:

Max. L/D	39 at 54 mph
Min. sink	1.0 ft/s at 47 mph
sink	6.6 ft/s at 97 mph
Stalling speed	36 mph
Placard speed	157 mph
Max. rough air speed	95 mph

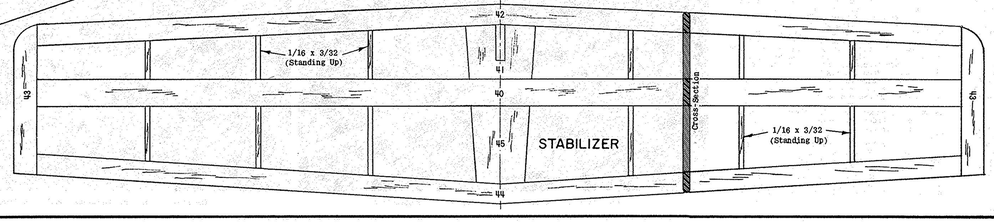
RIGHT WING PANEL

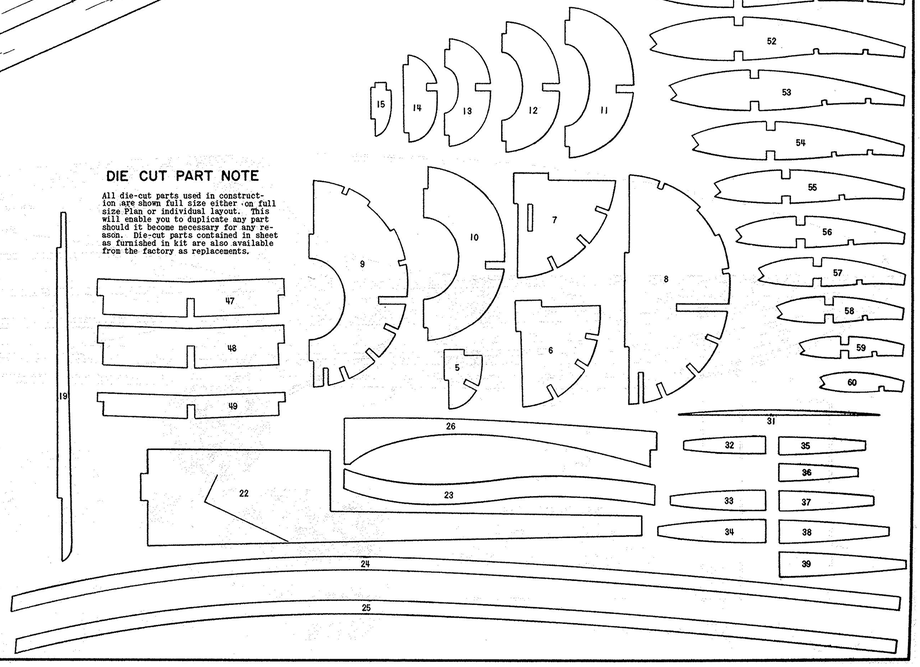
LEFT WING PANEL



TAIL ASSEMBLY

Stabilizer is built on flat surface directly over Plan. Pin and cement numbered parts in place. All strips are 1/16x3/32 (standing up) cut to fit and cemented in place. Allow structure to dry thoroughly then sand smooth, rounding off perimeter as shown in cross-section. Cement Rudder Parts #29 to #30. Allow to dry and remove from Plan. Pin #28 to rear of #19. Cement #36 to #28 directly under Rib #35, being careful not to get any cement on the Pin structure, since Rudder must be removed. Assembled #29 & #30 is cemented to rear of Rib #36 and bottom of #28 (centered) as shown in sketch. Ribs #37, #38 & #39 are cemented in place. Allow structure to dry thoroughly, then remove Rudder. Sand frame smooth, then cover Rudder and Stab as described in Silkspan note.



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.