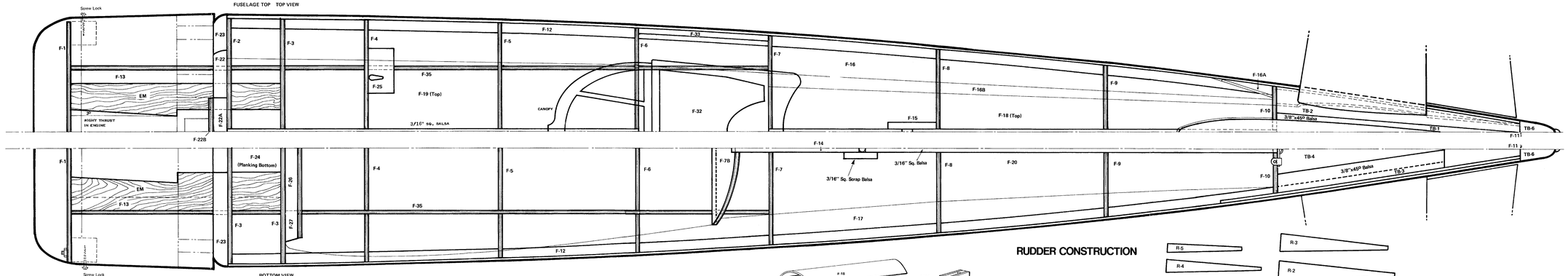
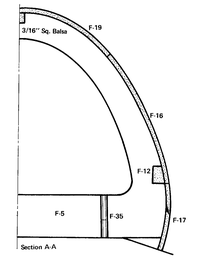
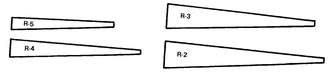
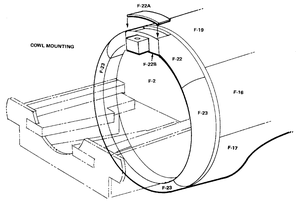
FUSELAGE TOP VIEW

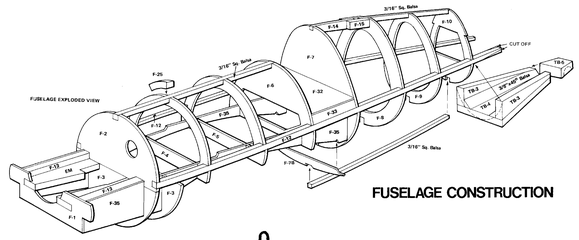




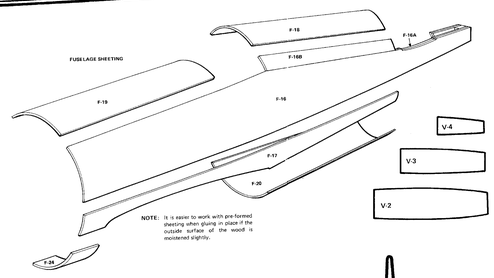
RUDDER CONSTRUCTION



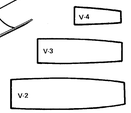


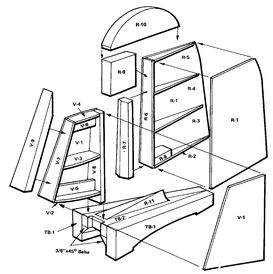


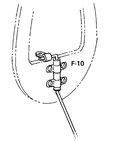
FUSELAGE CONSTRUCTION

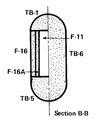


NOTE: It is easier to work with pre-formed sheeting when gluing in place if the outside surface of the wood is moistened slightly.

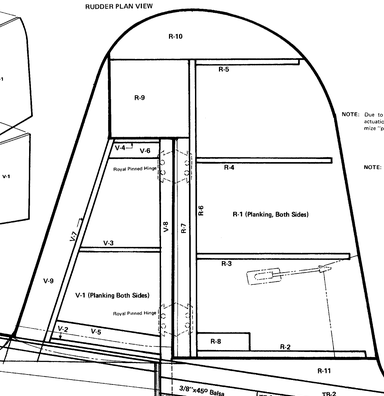






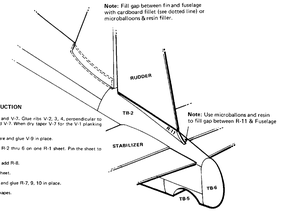


RUDDER PLAN VIEW



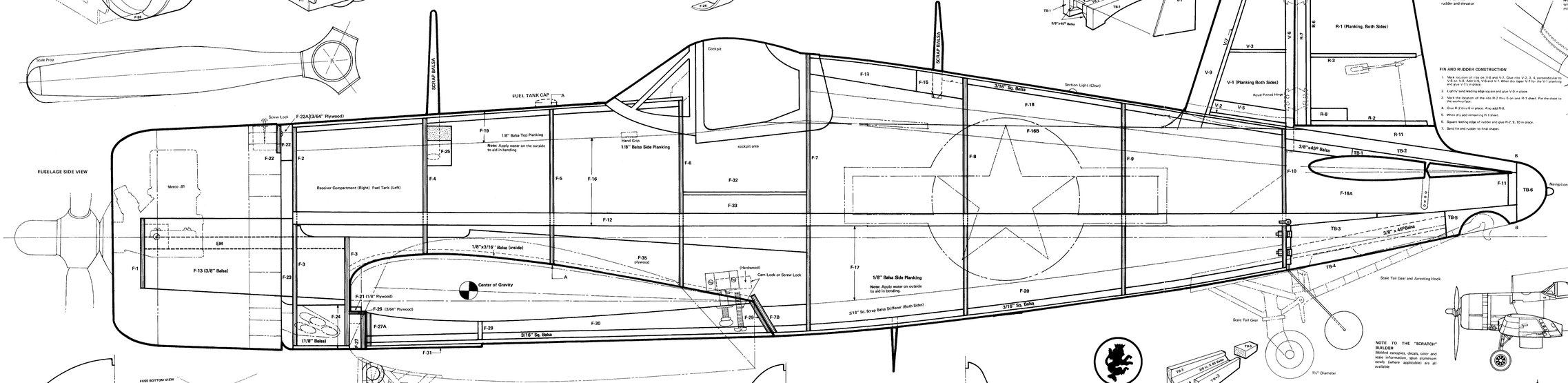
NOTE: Due to size of rudder a push-pull actuation is recommended to minimize "play" and possible flutter.

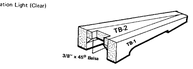
NOTE: Real F4U-1D had fabric covered rudder and elevator

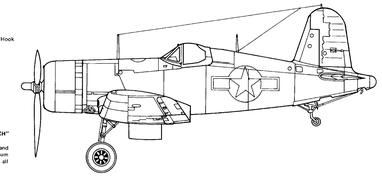


FIN AND RUDDER CONSTRUCTION

1. Mark location of ribs on V-8 and V-3. Glue ribs V-2, 3, 4, perpendicular to V-8 on V-8. Add V-5, V-6 and V-7. When dry (ages 1/2 hr.) fit the V-1 planking and glue V-1's in place.
2. Lightly sand leading edge square and glue V-9 in place.
3. Mark the location of the ribs R-2 thru 6 on one R-1 sheet. Pin the sheet to the worksurface.
4. Glue R-2 thru 6 in place. Also add R-8.
5. When dry add remaining R-1 sheet.
6. Square leading edge of rudder and glue R-7, 9, 10 in place.
7. Sand fin and rudder to final shapes.

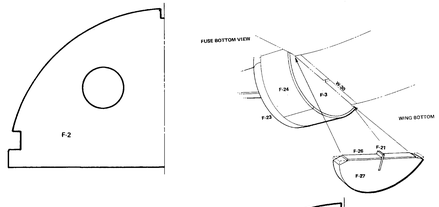


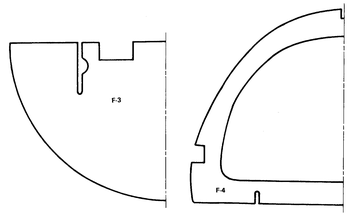


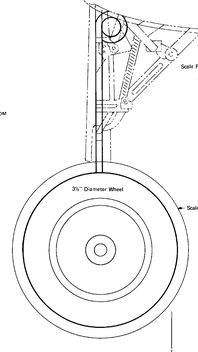


NOTE TO THE "SCRATCH" BUILDER

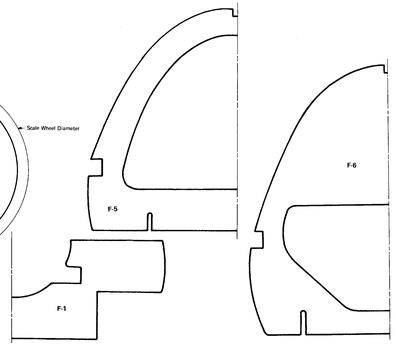
Molded canopies, decals, color and scale information, spun aluminum cowls (where applicable) are all available

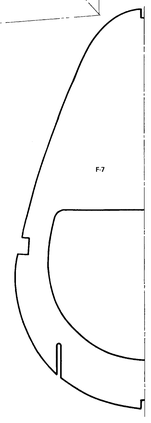


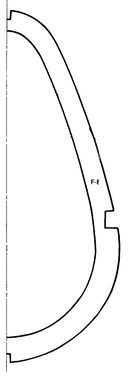


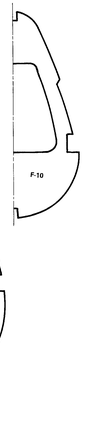


FUSELAGE SECTIONS





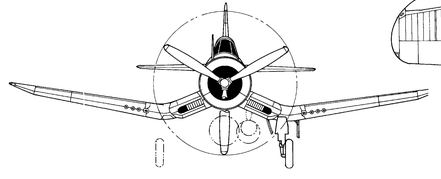


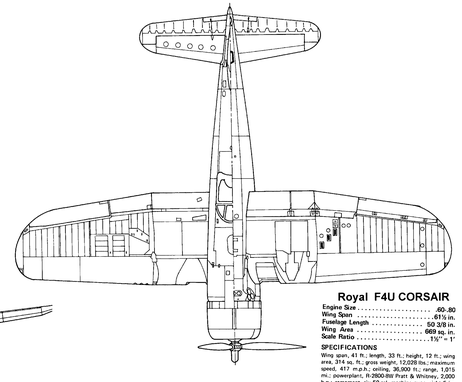


ROYAL PRODUCTS CORP.

F4U-1D Corsair

Hi Sky H.E Plans





Royal F4U CORSAIR

Engine Size	.60-.80
Wing Span	61½ in.
Fuselage Length	50 3/8 in.
Wing Area	669 sq. in.
Scale Ratio	1½" = 1'

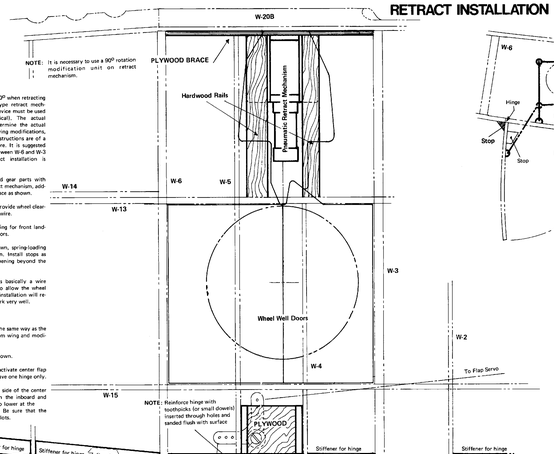
SPECIFICATIONS

Wing span, 41 ft.; length, 33 ft.; height, 12 ft.; wing area, 314 sq. ft.; gross weight, 12,039 lbs.; maximum speed, 417 m.p.h.; ceiling, 36,900 ft.; range, 1,015 mi.; powerplant, R-2800-8W Pratt & Whitney, 2,000 h.p.; armament, six 50-cal. machine guns, eight 5 in. rockets, two 1,000 lb. bombs.

ROYAL PRODUCTS CORP.

CHANCE VOUGHT F4U-1D Corsair

RETRACT INSTALLATION

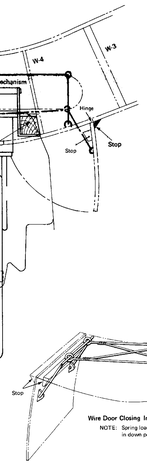


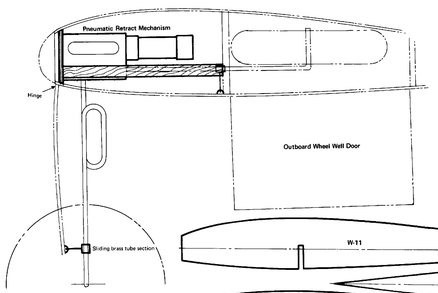
NOTE: It is necessary to use a 90° rotation modification unit on retract mechanism.

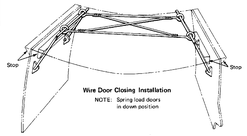
RETRACT INSTALLATION

NOTE: Since wheel must rotate 90° when retracting into wing, the proper type retract mechanisms and 90° rotating device must be used (pneumatic or mechanical). The actual mechanism used will determine the actual placement of necessary wing modifications, therefore the following instructions are of a more or less general nature. It is suggested that top wing sheeting between W-6 and W-3 be omitted until retract installation is complete.

1. Replace W-22's and W-23 fixed gear parts with hardwood rails to support retract mechanism, adding the plywood leading edge brace as shown.
2. Cut away ribs W-5 and W-4 to provide wheel clearance, and notch W-13 for wheel wire.
3. Carefully cut away lower sheeting for front landing gear panel and wheel-well doors.
4. Hinge wheel well doors as shown, spring-loading the doors in the open position. Install stops as shown to keep doors from opening beyond the straight-down position.
5. The door closing mechanism is basically a wire saddle, located in a position to allow the wheel itself to close the doors. This installation will require careful fitting, but will work very well.





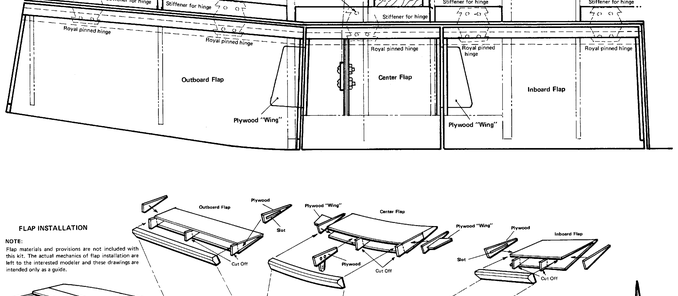


Wire Door Closing Installation
NOTE: Spring load doors in down position

FLAP INSTALLATION

NOTE: Flaps are constructed in the same way as the ailerons, i.e. cut away from wing and modified as shown.

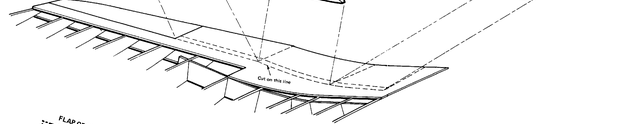
1. Cut away flaps and modify as shown.
2. Install bell-crank as shown to activate center flap only. Note that this flap is to have one hinge only.
3. The plywood "wings" on each side of the center flap fit into matching slots on the inboard and outboard flaps, causing flaps to lower at the same time as the center flap. Be sure that the "wings" move smoothly in the slots.

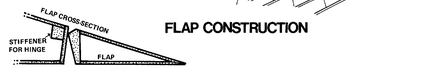


NOTE: Reinforce hinge with toothpicks (or small dowels) inserted through holes and sanded flush with surface.

FLAP INSTALLATION

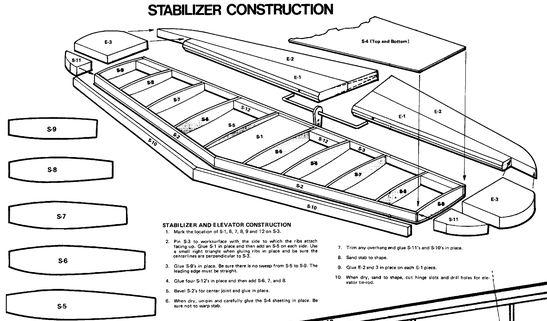
NOTE: Flap materials and provisions are not included with this kit. The actual mechanics of flap installation are left to the interested modeler and these drawings are intended only as a guide.





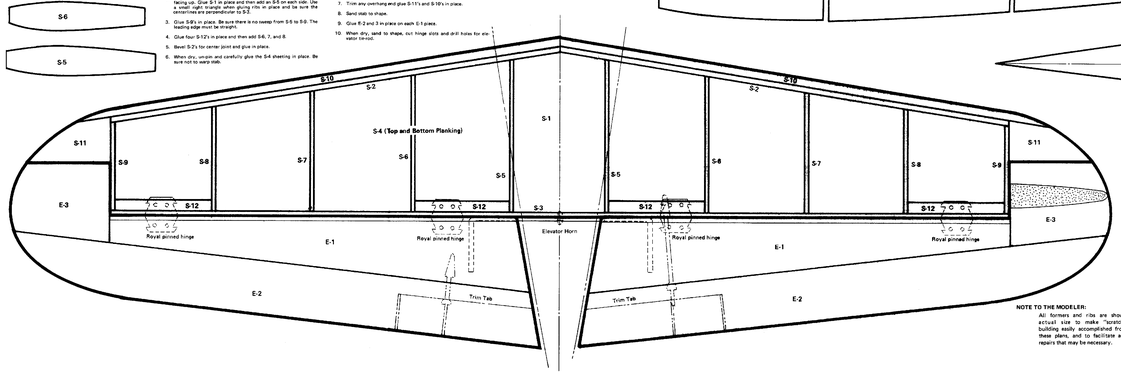
FLAP CONSTRUCTION

STABILIZER CONSTRUCTION

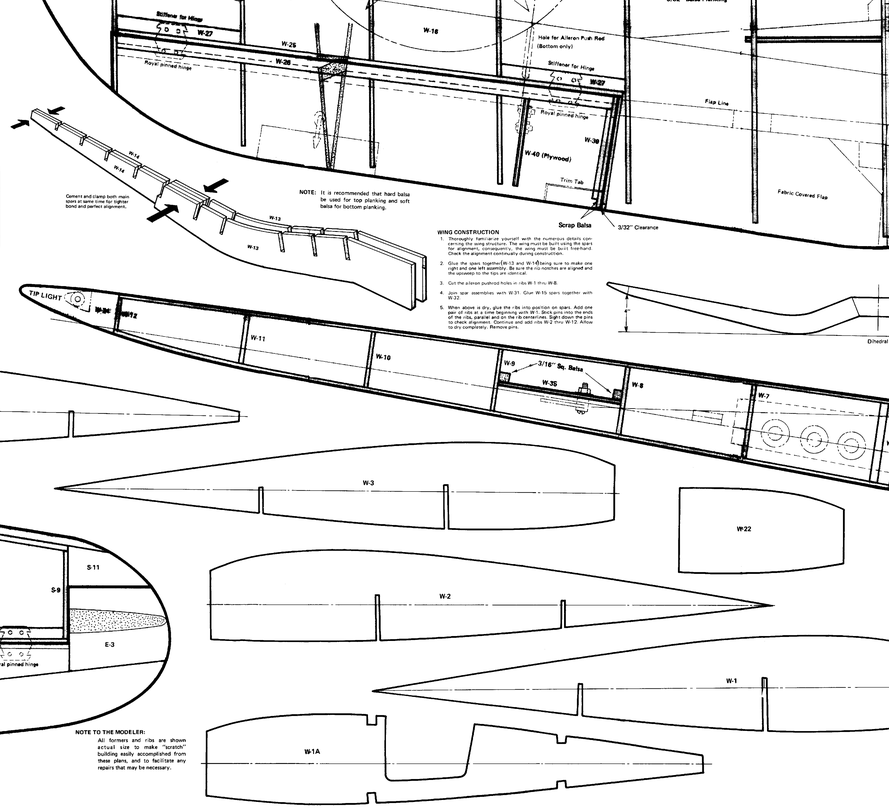


STABILIZER AND ELEVATOR CONSTRUCTION

1. Mark the location of S-1, 6, 7, 8, 9 and 12 on S-3.
2. Pin S-3 to worksurface with the side to which the ribs attach UP. Glue S-12's in place, making sure that the glue forms a small cleft triangle when gluing ribs in place and be sure the centerlines are perpendicular to S-3.
3. Glue S-9's in place. Be sure there is no sweep from S-5 to S-9. The leading edge must be straight.
4. Glue four S-12's in place and then add S-6, 7, and 8.
5. Bevel S-2's for center joint and glue in place.
6. When dry, un-pin and carefully glue the S-4 sheeting in place. Be sure not to warp stab.
7. Trim any overhang and glue S-11's and S-10's in place.
8. Sand stab to shape.
9. Glue E-2 and 3 in place on each S-1 piece.
10. When dry, sand to shape, cut hinge slots and drill holes for elevator tie-rod.



NOTE TO THE MODELER: All formers and ribs are shown actual size to make "scratch" building easily accomplished from these plans, and to facilitate any repairs that may be necessary.



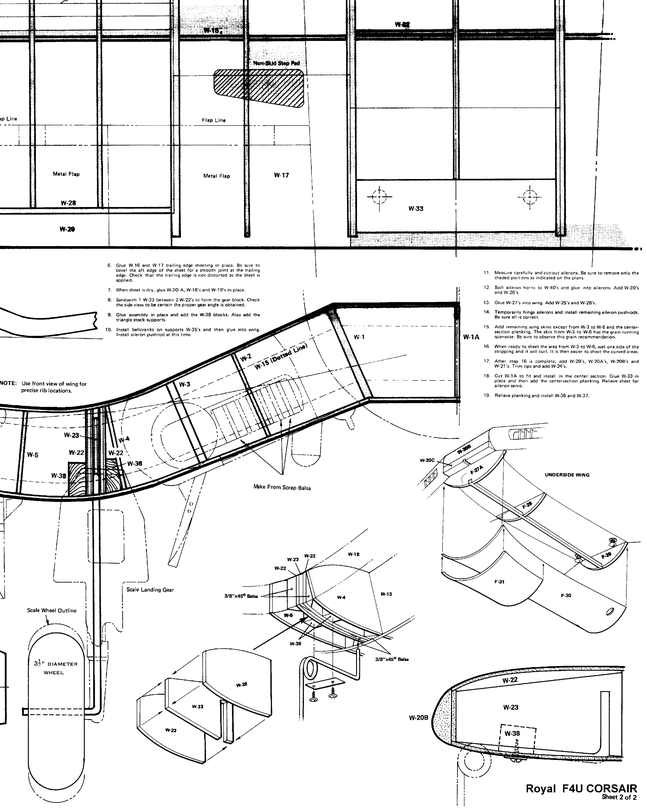
Corners and coping both made good at same time for tighter bond and perfect alignment.

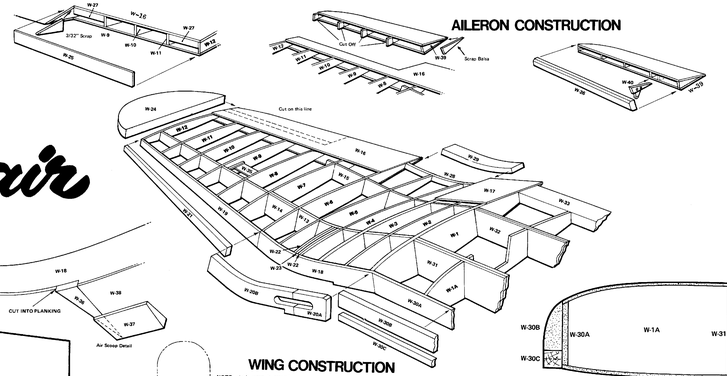
NOTE: It is recommended that hard balsa be used for top planking and soft balsa for bottom planking.

WING CONSTRUCTION

1. Thoroughly familiarize yourself with the numerous details contained in these plans before starting construction. Since the wing must be left-hand and right-hand, consequently, the wing must be built right-hand. Check the alignment continuously during construction.
2. Glue the spars together (W-13 and W-14) making sure to make one right and one left assembly. Be sure the rib notches are aligned and the epoxied to the tips are identical.
3. Cut the aileron pushrod holes in ribs W-1 thru W-8.
4. Join spar assemblies with W-31. Glue W-15 spars together with W-32.
5. When above is dry, glue the ribs into position on spars. Add one pair of ribs at a time beginning with W-1. Work outs into the ends of the ribs, parallel and on the rib centerlines. Sight down the spars to check alignment. Continue and add ribs W-2 thru W-12. Allow to dry completely. Remove jigs.
6. Glue W-16 and W-17 trailing edge sheeting in place. Be sure to bevel the aft edge of the sheet for a smooth joint at the trailing edge. Check that the trailing edge is not distorted as the sheet is applied.
7. When sheet is dry, glue W-30-A, W-18's and W-19's in place.
8. Sandwich 7 W-22 between 2 W-22's to form the gear block. Check the side views to be certain the proper gear angle is obtained.
9. Glue assembly in place and add the W-38 blocks. Also add the triangle stock supports.
10. Install beltcranks on supports W-25's and then glue into wing. Install aileron pushrod at this time.
11. Measure carefully and cut-out ailerons. Be sure to remove only the shaded portions as indicated on the plans.
12. Bolt aileron horns to W-40's and glue into ailerons. Add W-39's and W-26's.
13. Glue W-27's into wing. Add W-25's and W-28's.
14. Temporarily hinge ailerons and install remaining aileron pushrods. Be sure all is correct.
15. Add remaining wing struts except from W-2 to W-6 and the center-section planking. The skin from W-5 to W-8 has the gyro running scanner. Be sure to observe this gyro recommendation.
16. When ready to sheet the area from W-2 to W-6, wet one side of the strapping and it will curl. It is then easier to sheet the curved areas.
17. After step 16 is complete, add W-29's, W-30A's, W-30B's and W-31's. Trim tips and add W-24's.
18. Cut W-1A to fit and install in the center section. Glue W-33 in place and then add the centersection planking. Relieve sheet for aileron servo.
19. Relieve planking and install W-36 and W-37.

NOTE: Use front view of wing for precise rib locations.



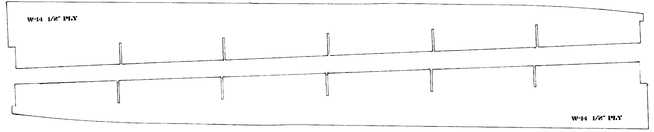


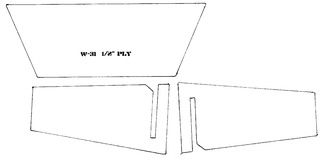
AILERON CONSTRUCTION

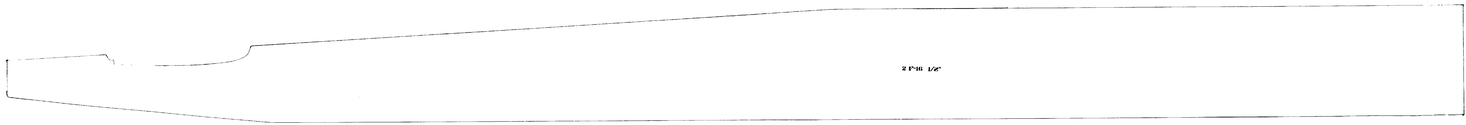
WING CONSTRUCTION

NOTE: Left wing is assembled on reverse side of this drawing. Plan may be rubbed with a light oil to increase transparency.

Royal F4U CORSAIR
Sheet 2 of 2







ROYAL Corsair

Templates drawn by:

Luke Zollner