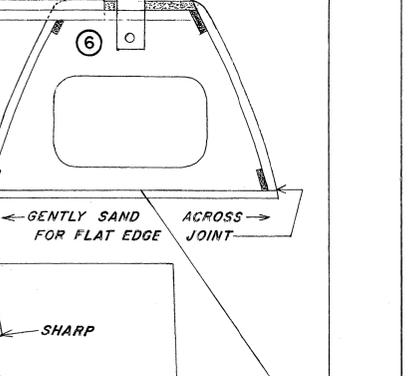
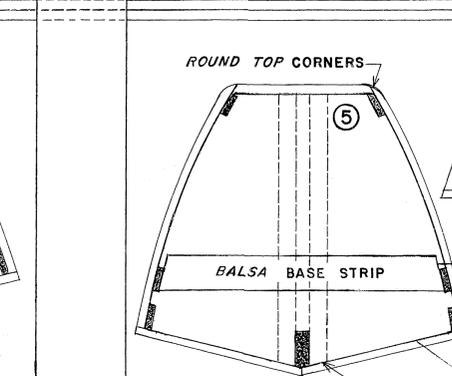


**GENERAL PLAN OF FLOAT CONSTRUCTION**  
 Floats built as one unit. Streamlined spruce cross-bars built into structure, join floats to form true alignment with great strength and simplicity. All bulkheads shaped, notched, spruce keels precisely shaped: top, side, bottom sheets contour-shaped. Assemble these finished parts (inverted) directly over full-size plan.

**STRUCTURAL DETAILS**  
 note: To ease assembly, refer to views of parts on plan and fig. "A" as you follow the step-by-step instructions. You need a board 18" wide, at least 32" long, in which you can stick pins.  
 Lay plan on board, cover with plastic-wrap material before applying glue to any parts.  
 2. Place shaped balsa top sheets directly over simulated wood grain. Mark and cut precisely over the cut-out sections indicated by "X" marks. These are four smaller 3/16" x 3/8" rectangles for

strut-mounting brackets and four larger rectangle sections from inside edges for upper cross-bar ends.  
 3. Mount the four aluminum strut brackets to plywood bulkheads #3 and #6 using 4-40 round-head bolts and nuts.  
 4. Glue and align base-strips across #5 bulkheads using pattern on plan for placement.  
 5. Mark and trim lower sections of cross-bars (slotted on each end) to fit over strut-brackets.  
 6. "Block up" the top sheets from the board using 1/8" thick wood strips spaced for support under sheets. Double up two strips (for 1/4" thick spacer), place under front edges of #1 bulkhead positions, forming slight upsweep from #3 bulkhead position. This "blocking-up" process allows the aluminum strut-brackets, already bolted to plywood bulkheads to protrude through those smaller rectangular holes you cut in the top sheets in step #2.



7. Start at aft end, glue, align all bulkheads perpendicular to top sheet. Glue lower sections of cross-bars at same time plywood bulkheads #3 and #6 are installed, apply glue generously. Base strip must be on AFT face of #5 bulkhead.  
 8. A very slight bevel should be trimmed at glue-joint edge of #1 bulkheads to obtain true angle from assembly board. (Top sheet upsweep at #1 bulkhead joint. Formed plastic nose sections join to this angle, later.)  
 9. Glue step keels in notches before glue sets in bulkhead joints to top sheets.  
 10. Mark, trim out airfoil-like sections from inside corner strips for placement over cross-bars.  
 11. Glue outside corner strips. Apply glue to edges touching top sheets, too.  
 12. Glue aft corner strips which form bottom edges of floats. These are straight from #5 bulkhead to the aft end. Note overlap to #4 bulkhead.  
 13. Glue corner strips which form the bottom edges Forward of the Step. These are contour shaped and require only the gentle lateral bend to complete the frame as Fig. "A" illustrates.  
 14. Install nylon bearings in slots in #9 bulkheads. Epoxy short pins (round toothpicks) in holes in protruding tips of nylon bearings on inside face. For other than a G-S design, install plywood doublers between #3 and #4, #5 and #6 bulkheads-glued across inside surfaces of top sheets (An adjustable base range for strut attachments.)  
 15. Gently sand trim a bevel on edges of top sheets to blend with bulkheads' shape.  
 16. Trim out airfoil-like sections from side sheets for inside float cover. Align upper edge flush with top surface of top sheet. Glue aft section first.  
 17. Glue outer side sheets, aft section first. IMPORTANT: Go over assembly with glue to seal all internal joints, especially around plywood bulkheads and cross-bars.  
 18. Forward, bottom sheets are precisely shaped but need bevel trim along center edges which join neatly over "peak" of step keels. Center edge has less curvature than outer edge. Use one of these bottoms for a pattern to make four cover panels out of heavier Golden Panel material. Step #25 will complete this step in using Golden Panel. Glue one side of bottom using step keel's center-peak for alignment. Use slower drying waterproof glue on bulkhead edges and quick-setting glue to attach outer edges held firmly.  
 19. Aft, triangular bottom sheet is glued tightly against #5 bulkhead-over base strip AFTER a gentle sanding across edges for flat joint edge. See #6 bulkhead illustration.  
 20. Glue upper cross-bar section to lower section. Inset ends in cut-outs in top sheets. Bind with rubber bands or tape. (Clothespins make good clamps.)

21. Use a thin-blade "razor-saw" to trim flanges from plastic nose pieces. Hold flat on board, saw into corner of flange-around it-with blade parallel to flange. Trim edges flat by running part across sheet of medium grit sandpaper.  
 22. Bevel, trial fit bulkhead #11 into plastic nose for flush fit inside its trimmed edges. Glue bulkhead to plastic using "Hot Stuff" or epoxy glue. When set, glue nose to #1 bulkhead, align to float contour. Sand trim to blend neatly.  
 23. Sand trim upper corners round. Maintain sharp edges on all bottom sections.  
 24. Trim aft, bottom Fin to wedge-like shape. Glue and align straight, in center of bottom from the Step to Aft end-trimmed to blend with shape of rudder.  
 25. Draw four Forward, bottom cover panels on the Golden Panel material (refer to step #18). Add 1/4" extra width to two panels along their center edges for an "overlap". Allow material for one inch forward "overlap" over plastic nose on all four cover panels. Material sands to neat blend.  
 One of the best contact adhesives is 3M Brand "FASTBOND 30", non-flammable, easy to apply liquid with less odor than usual. We recommend it for applying Golden Panel material to any surface. Follow directions on container.  
 26. Use this adhesive to cover Bottoms, forward of the STEP with Golden Panel cut out as in step #25. Apply the 1/4" wider cover panel FIRST for center overlap on each float. A few coats of clear aircraft butyrate dope greatly enhances the strength and tough surface of Golden Panel. It sands easily. A metallic sheen is easily achieved by sanding with 320 grit sandpaper. Use finer grit on final coats before applying color. Resins or other finishes absorb into Golden Panel material making it tremendously strong with a satin-smooth surface that is tough and durable.

**FINISHING**  
 Best to cover wood surfaces with silk, nylon, or equivalent material for added strength and finish to wood. Apply several coats of butyrate clear aircraft dope over wood and Golden Panel surfaces, or, Use your own favorite finish.

**CONTROL LINKAGE**  
 Original method of linkage is illustrated. One steel 1/16" rod about 11" long with nylon clevises on each end, one in next inner hole to model's rudder horn linkage, the other end attached to the flattened wire-hole on left float's actuating arm to water-rudder. Insert "Z" angle rods in each rudder actuating arm, bind, solder overlap of about 1" of rods mid-way between floats. Adjust rudders for parallel alignment. Bend upper angles in 3/32" wire actuating rods. Flatten and drill for clevis and wire linkage. Slip

on steel collar with set-screw (loose), insert through both nylon bearings, add small washer. Bend rod immediately below washers tight against lower nylon bearing. You can trim this right angle with needle-nose pliers by "gap" above steel collar temporarily set. Trim length of rod below bearing to fit rudder. Mount flexible outer housing to fuselage in front with rudder horn movement, curve back down along rear float strut-strap to strut-back along top surface of float to align with rudder actuating arm, in this case, bent up to illustrated version on this plan. Flexible type control linkage must be "anchored" at end and along the way for best results.

