

# SUPERFLOATS



Welcome to the exciting world of flying off water. The CGP Super Floats were designed specifically for the Carl Goldberg Anniversary Cub yet will work very well with almost any plane in the 6-9 lb., .50 to .90 engine range. Please follow the instructions carefully and you will find the kit very easy to assemble taking only about 6 to 8 hours. We also recommend the ventral fin, because as in some full-size Cubs it can help directional stability, making the model even easier to fly.

HAPPY FLYING!

#### Additional Items Needed:

- ☐ CA Glue and Epoxy
- ☐ One roll covering material.
- Or for a more durable finish;
  - ☐ Polyester resin
  - ☐ Paint, epoxy or polyurethane

#### For Installation On Models Other Than CG Anniversary Cub

- ☐ Two 24" lengths of 5/32" dia. wire (for new struts)
- ☐ CG 5/32" landing gear clamps

#### Tools and Supplies Needed

(You probably already have most of these)

- ☐ Miscellaneous rubber bands
- ☐ Wax paper or plastic wrap
- ☐ Modeling knife or single edge razor blade
- ☐ Sandpaper block & sandpaper; any grade 100-200, and any grade 240-320 (1 sht of each)
- ☐ A few dozen straight pins ("T" pins best)
- ☐ Two Allen wrenches (1/16" for #6 set screw and 3/32" for #4 socket head screw)
- ☐ Flat building board (that you can push pins into) 18" x 36"

- ☐ Light power or hand drill & drill bits (sizes 1/16", 3/32", 1/8", and 3/16")
- ☐ Soldering iron and solder (silver solder recommended)
- ☐ Soldering flux
- ☐ Silicone bathtub caulk
- ☐ Vaseline
- ☐ Pliers
- ☐ Small screwdrivers (1/8" blade tip)
- ☐ Iron for applying covering (not needed for painted finish)

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## Carl Goldberg Products, Ltd.

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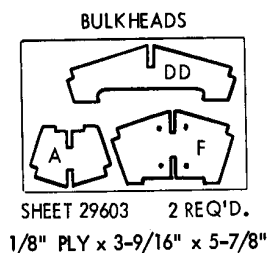
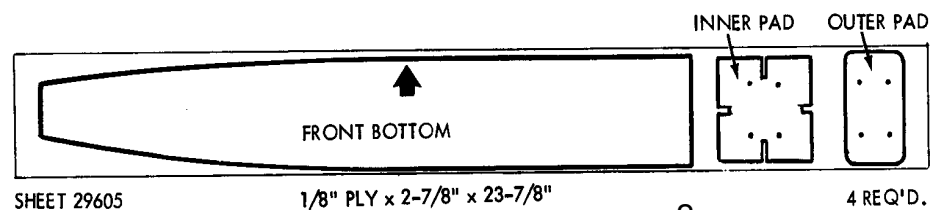
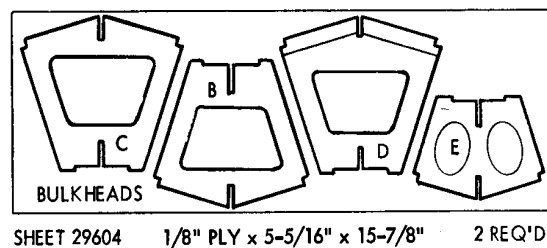
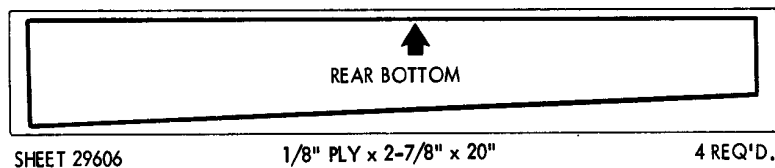
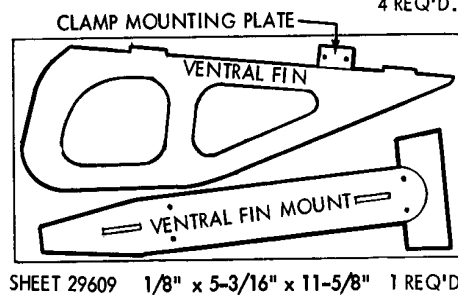
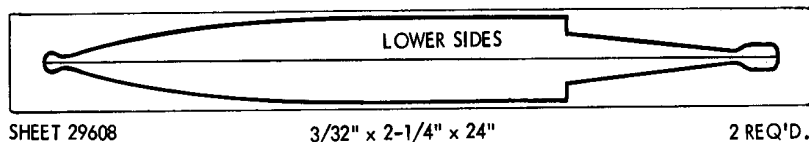
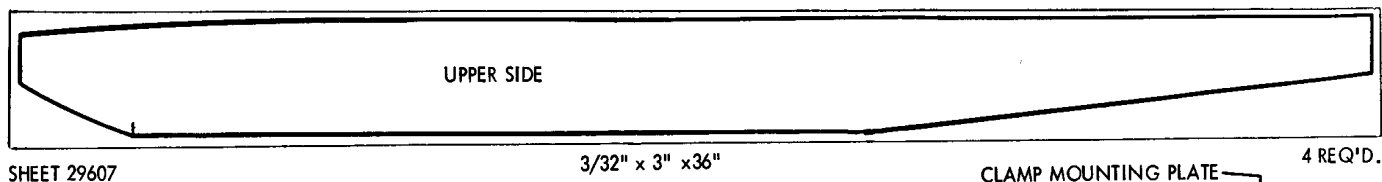
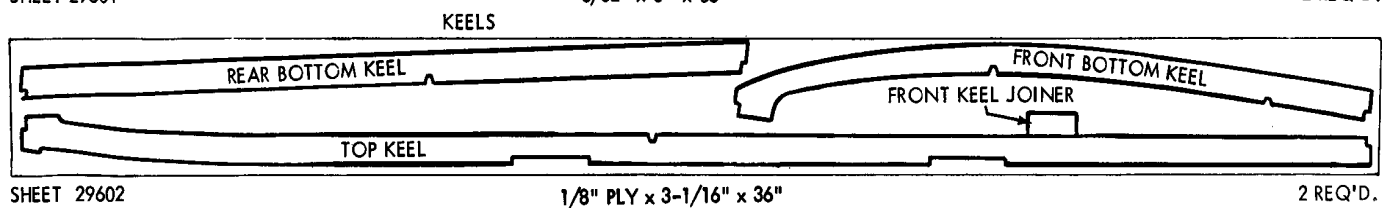
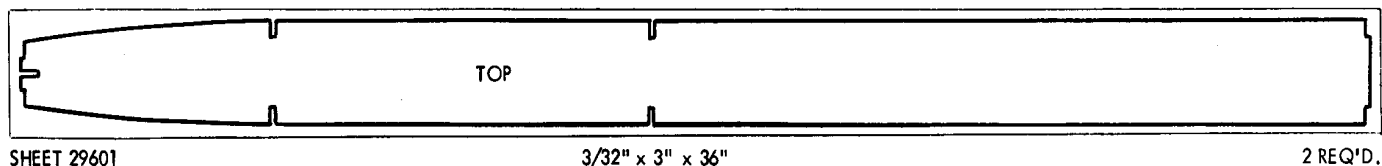
## WOOD PARTS IDENTIFICATION

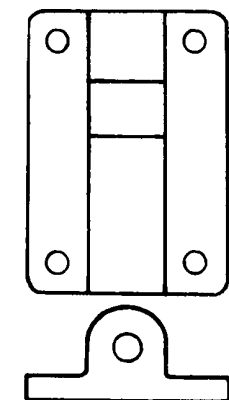
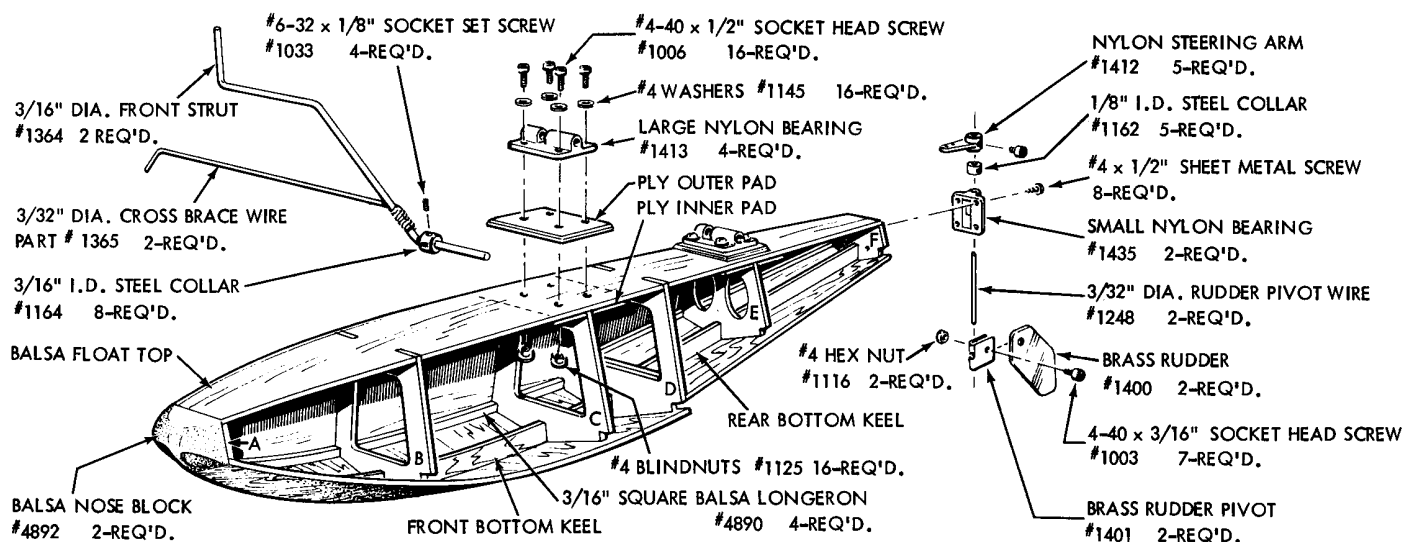
Be careful when removing parts (such as top keel) from die-cut sheets. Long parts are fragile until glued into a structural unit. If necessary, use a razor knife or razor saw to assist in the removal of parts from sheet. Sometimes a little trimming and sanding can improve parts where desired. Save scrap until the floats are completed, in case you should miss a part. Also, scrap is used for float mount reinforcement inside your model.

## ABOUT THE WOOD IN THE KIT

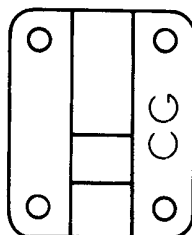
We strive to supply good quality materials in your kit. Wood parts are inspected with regard to the function they will serve. If an imperfection is spotted in a scrap corner of a die-cut sheet and doesn't affect actual parts, the sheet is considered acceptable. Also, internal stresses in wood are relieved as it is cut into parts. These relieved stresses may cause some parts to bow. Bows in wood parts will readily straighten out as they are glued into a structural unit.

If you should have any questions about the parts in this kit, please include the part number(s) listed on these pages when referring to part(s) in question.

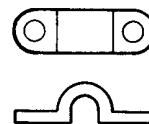




LARGE #1413  
FOR STRUT MOUNTING



SMALL #1435  
FOR WATER RUDDER



5/32" NYLON CLAMP  
#1420 3 Pr. - REQ'D.  
FOR STRUT AND PUSHROD MOUNTING

5/32" DIA. REAR STRUT (NOT SHOWN)  
#1366 1-REQ'D.

5/32" I.D. STEEL COLLAR (NOT SHOWN)  
#1163 4-REQ'D.

## ADHESIVES

All our test floats were built using cyanocrylate glue (C/A) which is specially formulated to firmly glue the plywood and balsa used in your floats, and we strongly recommend it. Other good glues to use are EPOXY or Aliphatic Resin. They will, however, add considerably to the building time.

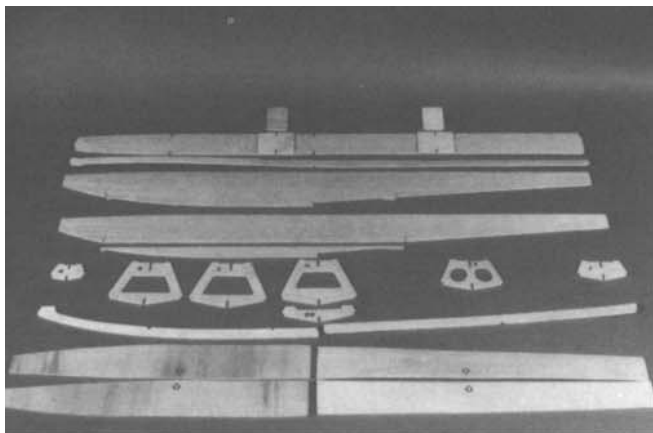
## WARNING

Do not use watery THIN types C/A glue for general construction of your floats, especially for the plywood parts. Thin C/A glues do not glue plywood adequately.

## CAUTION

Some people may experience allergic reactions when exposed to fumes from C/A glue or epoxy. This is very rare. However, it is always important that such glues, and also paints, thinners and solvents, be used with adequate ventilation to carry fumes away. A fan is recommended.

**USING EPOXY.** Epoxy comes in two parts which need to be mixed before using. Paper cups and wood coffee stirrers are useful for mixing. When buying epoxy, check the package to see how long it takes to set.

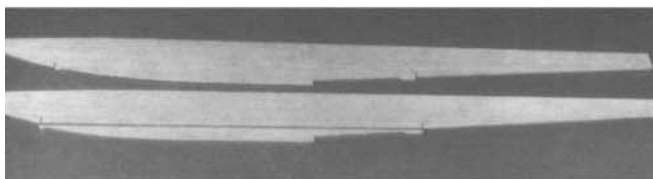


# FLOAT ASSEMBLY

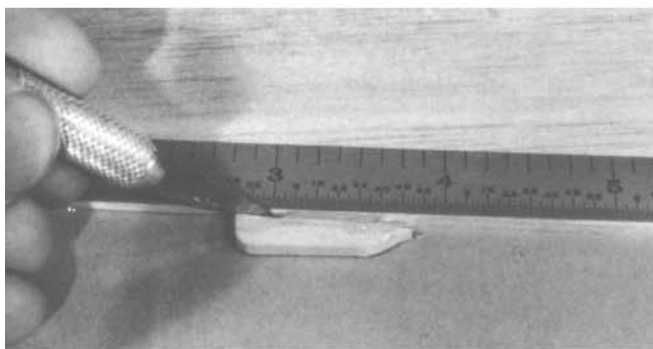
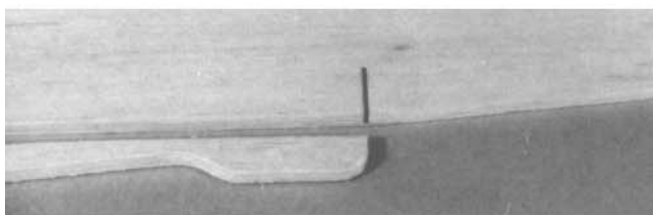
BECAUSE FLOATS ARE LARGE, WE RECOMMEND YOU ASSEMBLE ONE FLOAT AT A TIME AS SHOWN. CHECK BOXES ARE PROVIDED SO THAT YOU CAN KEEP TRACK OF STEPS YOU'VE COMPLETED AS YOU BUILD THE FIRST FLOAT AND THEN THE SECOND. NOTE THAT THE 1ST FOUR STEPS ARE FOR BOTH FLOATS, STEP 5 ONWARD IS FOR ONE AT A TIME.

Shown here are various parts laid out in their relative positions for easy recognition as you proceed to use them. Before gluing parts together, temporarily assemble wood parts up to step 14 to assure good notch fits, then go back to step 2 and completion.

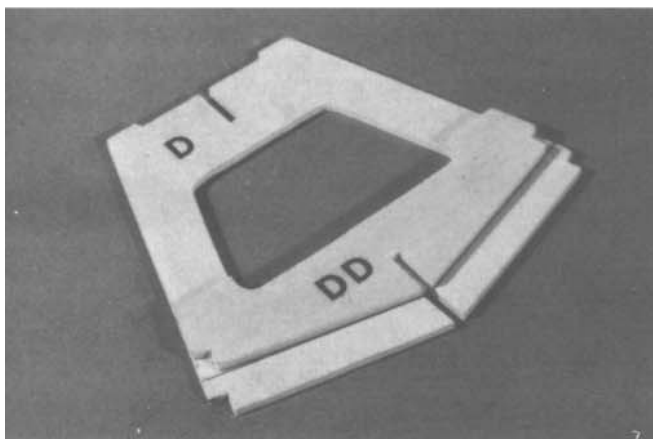
During float assembly, cover your flat pin accepting work surface with wax paper (or similar) so you don't glue your floats to the board.



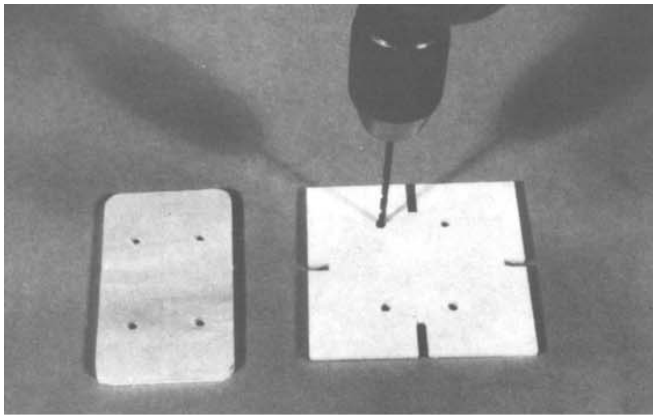
1. ☐ ☐ Make four float sides by gluing lower sides to upper sides. Note: guide marks on upper sides to locate lower sides, then trim off locator lugs at ends of lower sides to continue the intended lines.



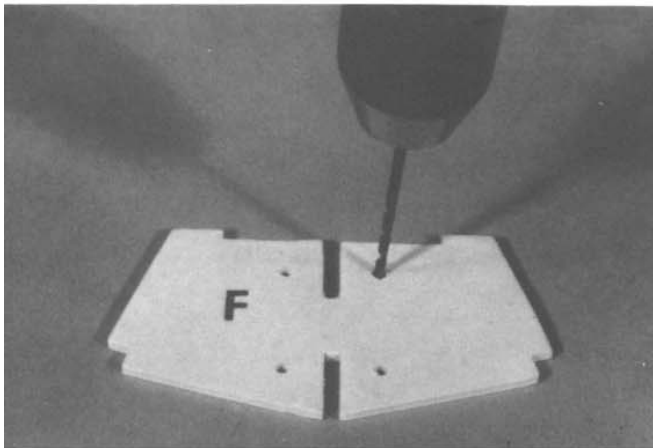
Use a straight edge such as a ruler to help guide your knife.



2. ☐ ☐ Glue Doubler "D-D" to Bulkhead "D" by aligning bottom of doubler to marking line on bulkhead. Repeat for the second Bulkhead "D" and Doubler "D-D".

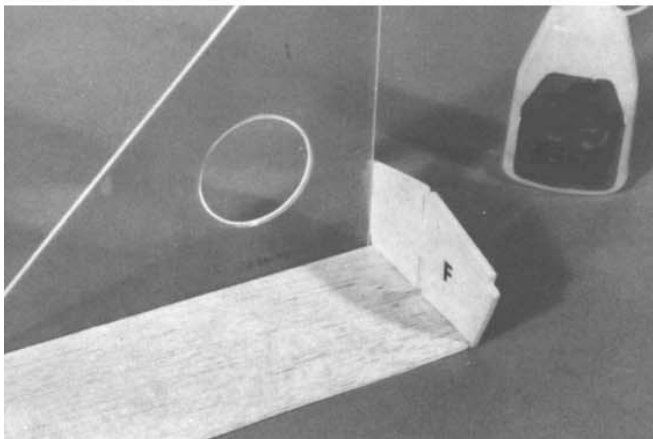


3. ☐ ☐ Drill out center punch marks for one set of inner and outer pads with 1/8" drill as shown. Repeat for other sets.

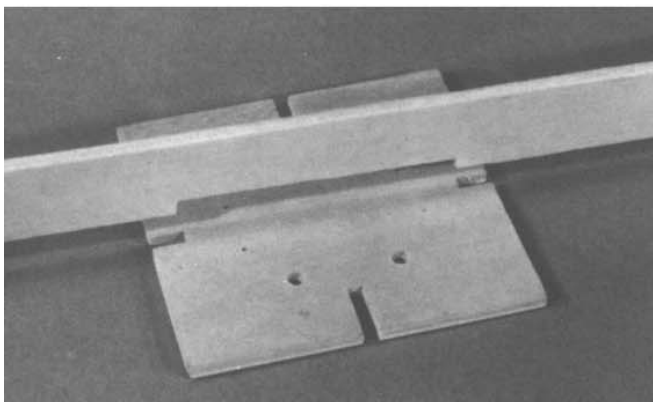


4. ☐ ☐ Drill out center punch marks on bulkhead "F" with 3/32" dia. drill. Note: Only do this step for one side of the float

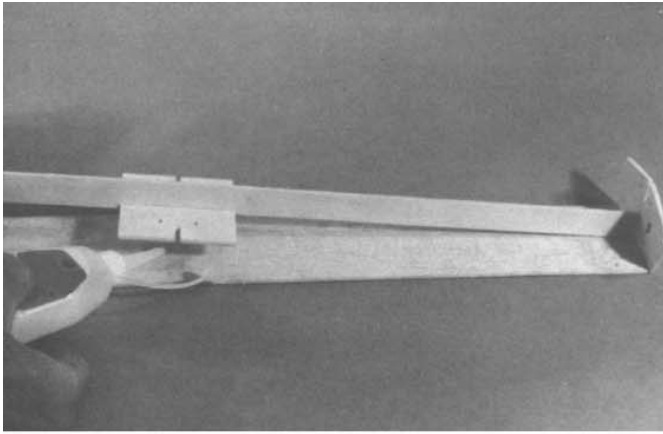
NOTE: From this point on you will be building one float at a time. Check the 1st box for the first float, the second box for the other.



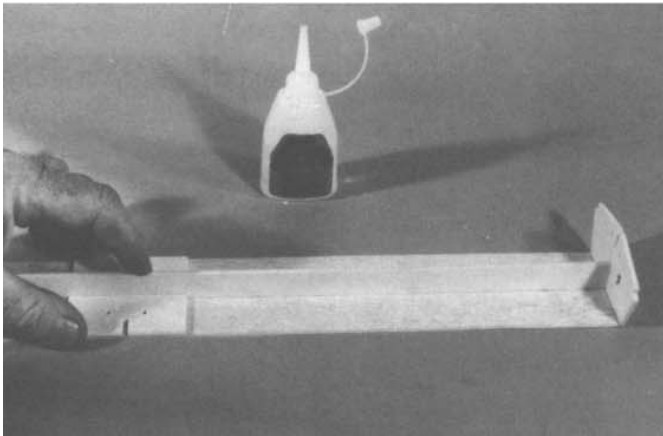
5. ☐ ☐ Glue bulkhead "F" to rear of float top sheeting and be sure to hold it straight up until glue dries.



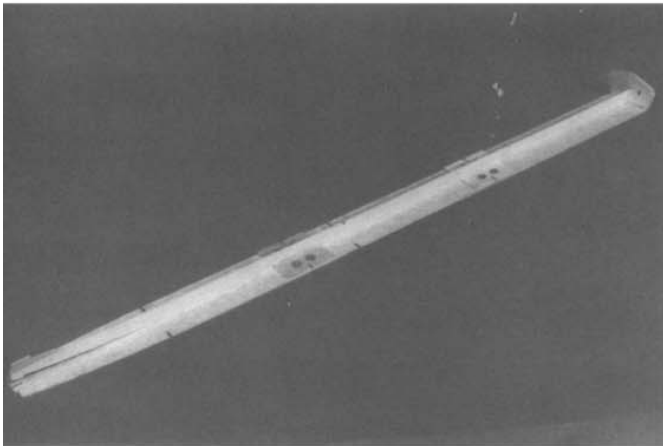
- 6a. In step 6a to 6d, you will be locating the inner pads on the float top using the keel as a guide—do not glue keel during these steps!  
☐ ☐ Using no glue, position inside mounting pads to top keel, doing rear one first as shown in step 6b & 6c.



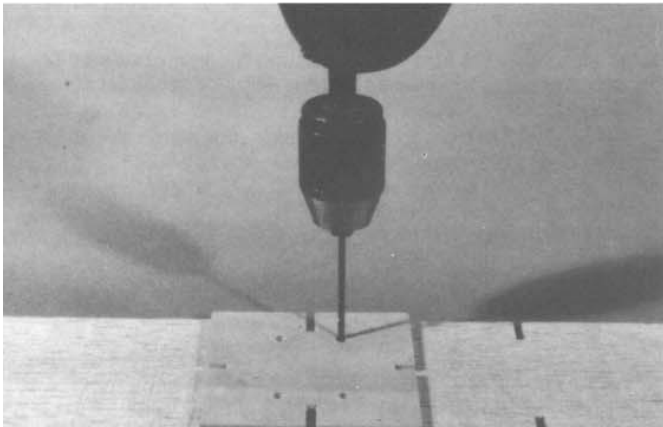
**6b.** ☐ ☐ Using no glue temporarily fit keel and pad assembly into bulkhead "F" to check fit. When satisfied with fit, lift as shown in photo, add glue to pad and press back together using keel as a guide.



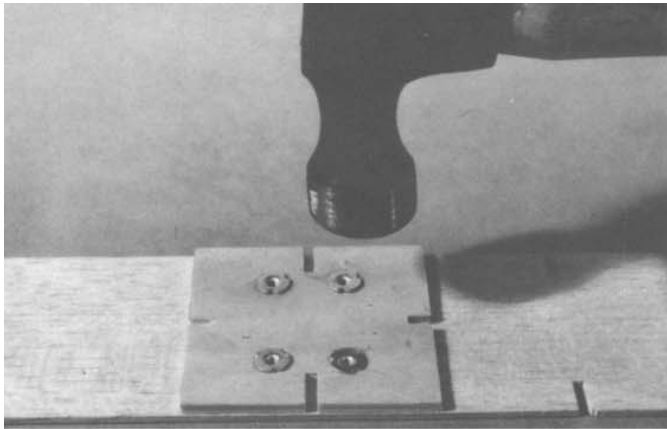
**6c.** ☐ ☐ Allow both pads to dry with keel temporarily in place.



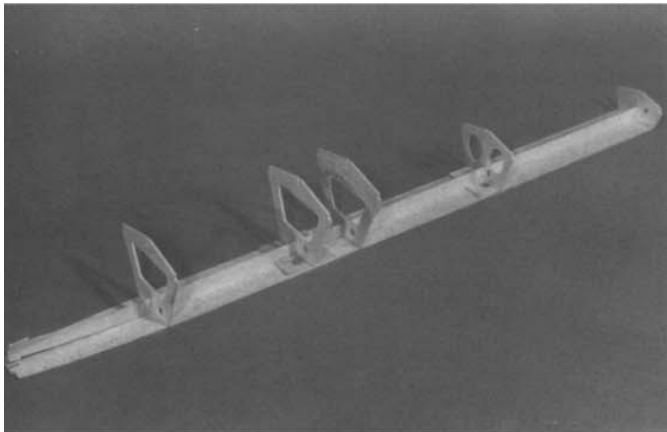
**6d.** ☐ ☐ With both pads in place.



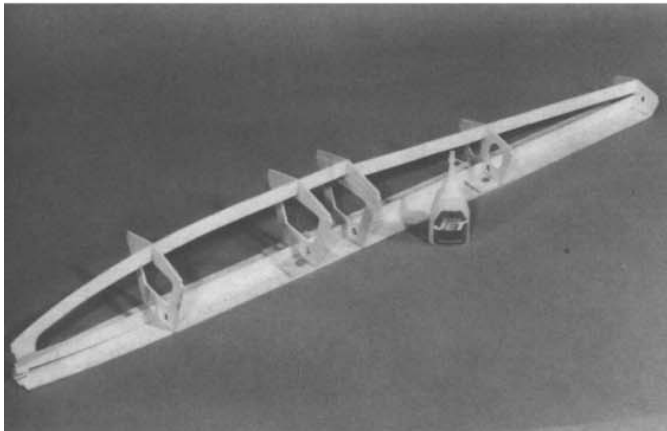
**7a.** ☐ ☐ Remove keel and drill through float top drill using the holes in pads as guides with a 1/8" dia. drill.



- 7b.** ☐ ☐ Install four blind-nuts in each pad, lightly tapping them in place. Apply glue around edge of blind nuts to prevent them working loose.

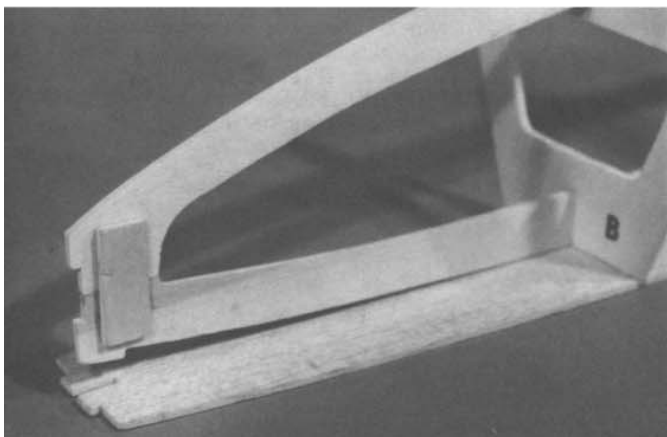


- 8a.** ☐ ☐ With pads still facing upward, pin top to flat working surface. Set top keel back in place and position bulkheads "B, C, D, and E" into notches as shown.

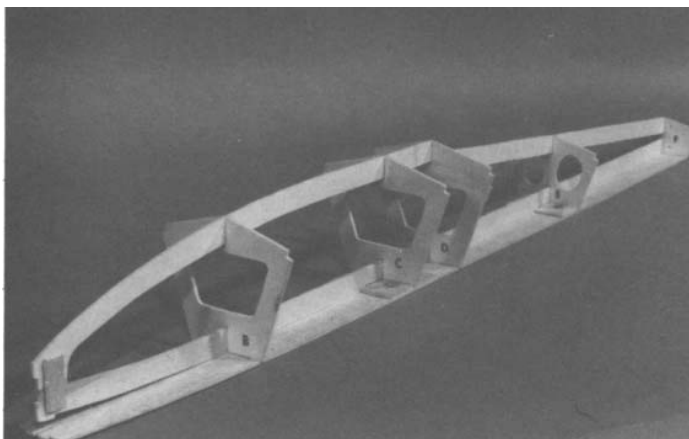


- 8b.** ☐ ☐ Using no glue, position rear bottom keel and front bottom keel in place.

- 8c.** ☐ ☐ Proceed to glue bulkheads to float top first—make sure they are pressed down in place and fully engaged in notches while drying.

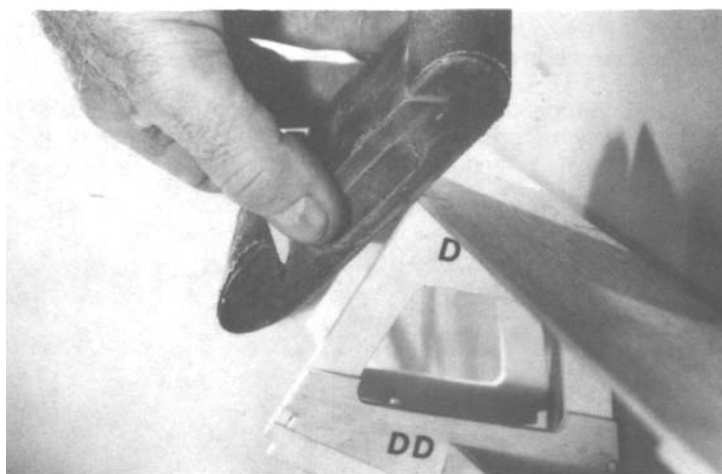
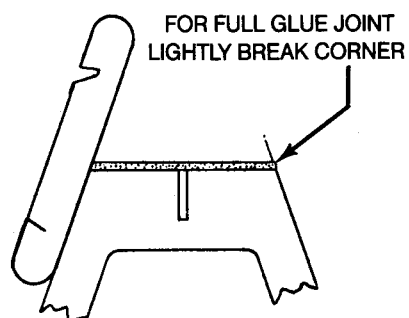
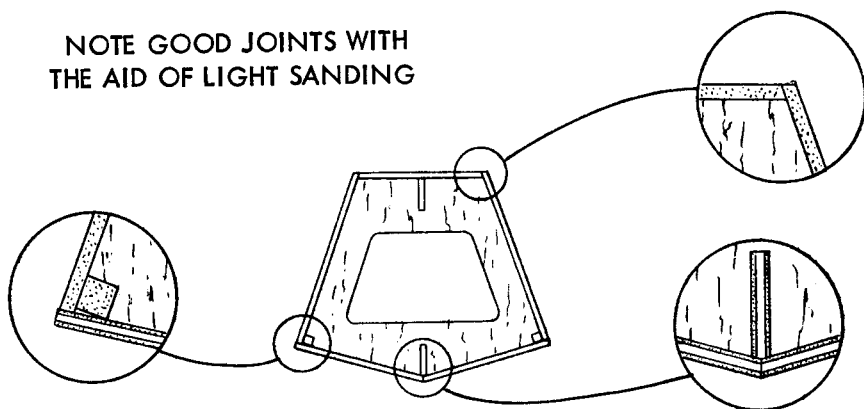


- 8d.** ☐ ☐ Glue keels together at front with keel joiner as shown.

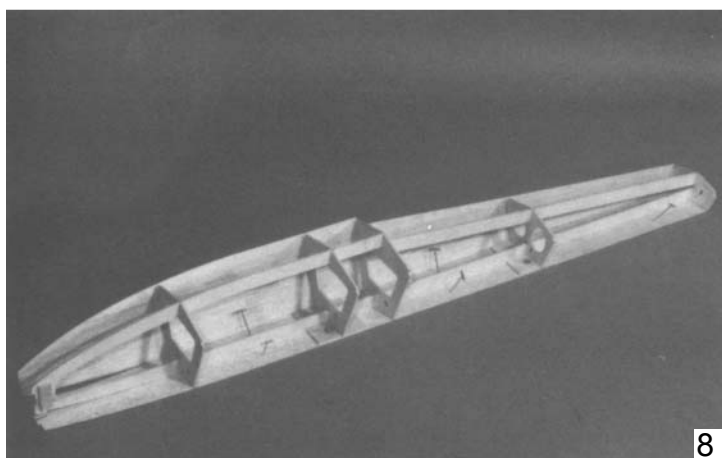


- 8e.** ☐ ☐ Then glue top keel to float top—BUT NOT at the front curve of keel.

NOTE GOOD JOINTS WITH  
THE AID OF LIGHT SANDING

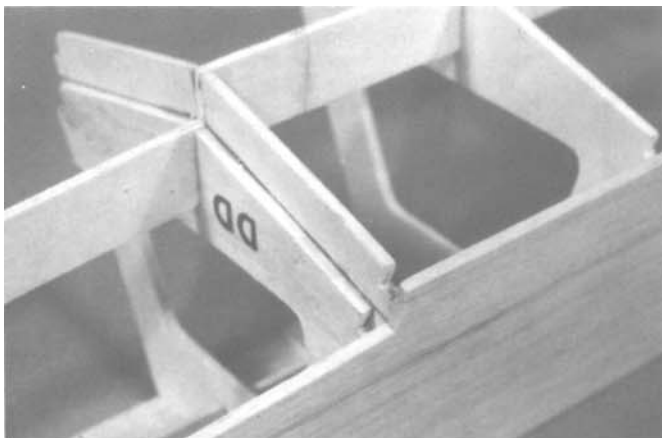


- 9a.** ☐ ☐ Break top corners lightly to align with bulkheads to insure good fit for sides.

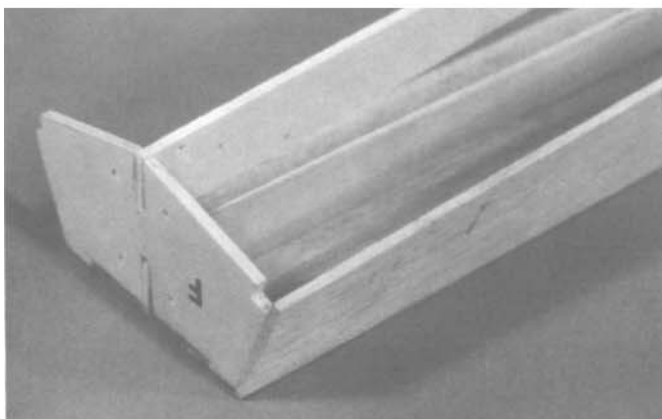


- 9b.** ☐ ☐ Again pin top to flat working surface. Look at Step 9e showing how float side is not yet glued from bulkhead "B" forward. From bulkheads "B" to "F" glue one float side to top and bulkheads (IMPORTANT: match step notch of float side to rear of bulkhead "D" see Step 9c).

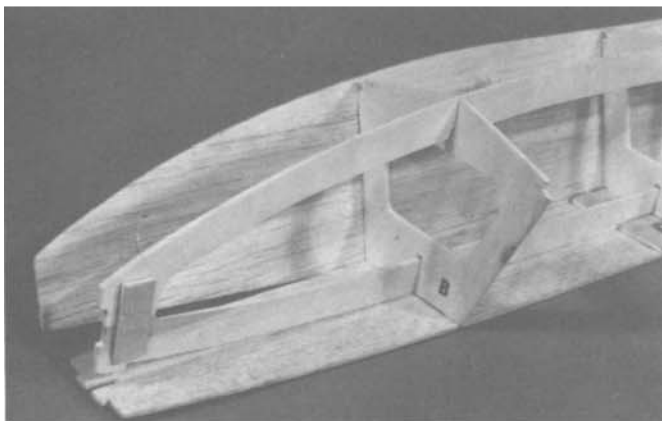




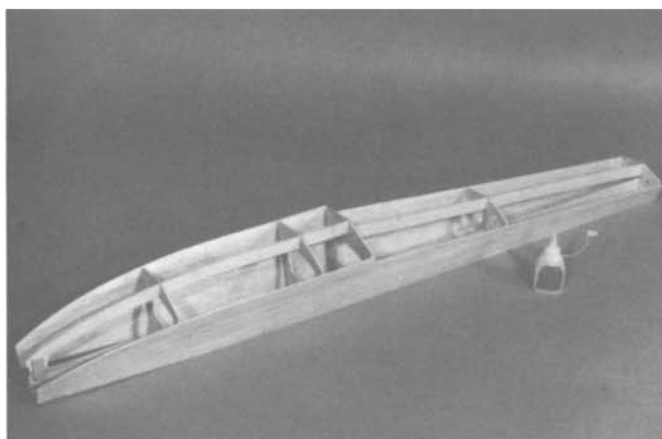
- 9c.** ☐ ☐ Photo showing notch of float side aligned with bulkhead "D".



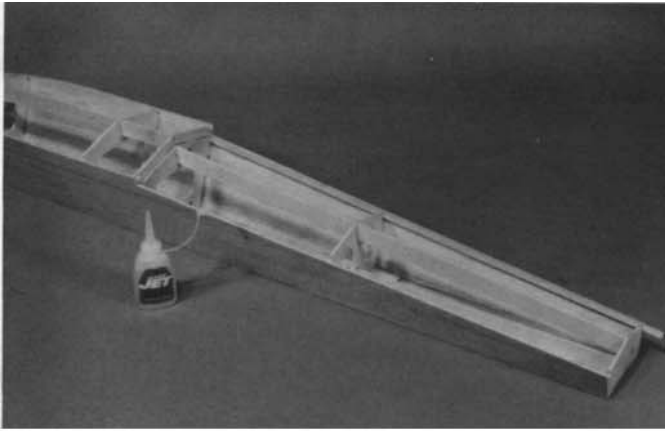
- 9d.** ☐ ☐ This photo shows float side glued flush to rear of bulkhead "F".



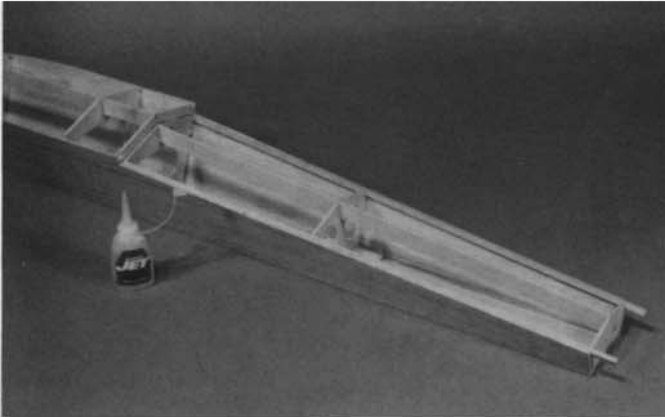
- 9e.** ☐ ☐ As viewed at front. Do not glue side to top forward of bulkhead "B".



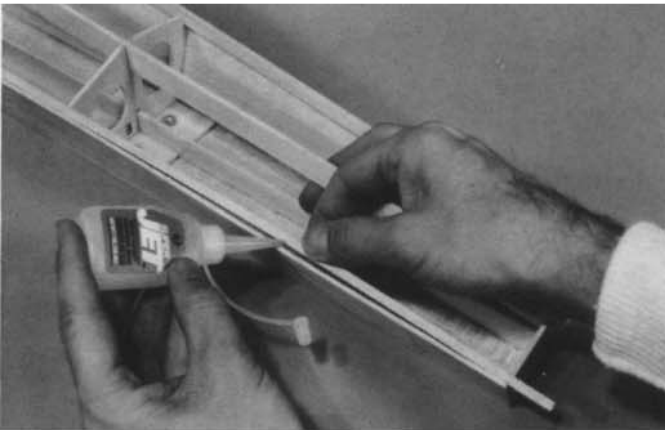
- 10.** ☐ ☐ Glue remaining side in same manner.



- 11.** ☐ ☐ Cut two 19-1/8" lengths from 3/16" sq. x 36-1/4" balsa. Place balsa strip in notches of bulkhead "DD, E and F" until completely seated. Do not glue to sides between bulkheads. This is done in Step 13.



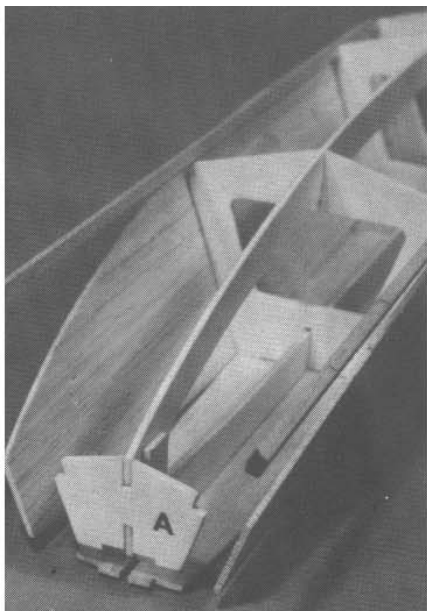
- 12.** ☐ ☐ Repeat step 17 for the other side.



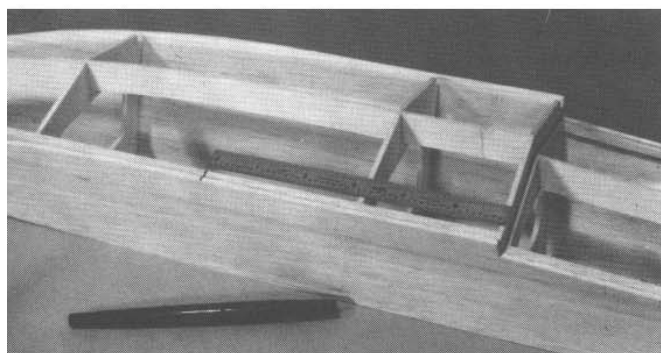
- 13.** ☐ ☐ Complete the gluing of the 3/16" sq. balsa to the sides.



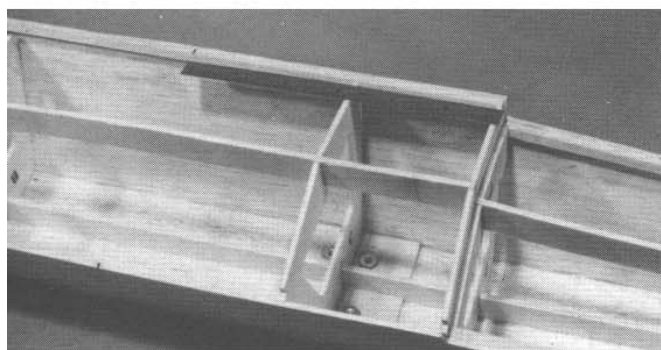
- 14.** ☐ ☐ Trim any excess flush with bulkhead "F".



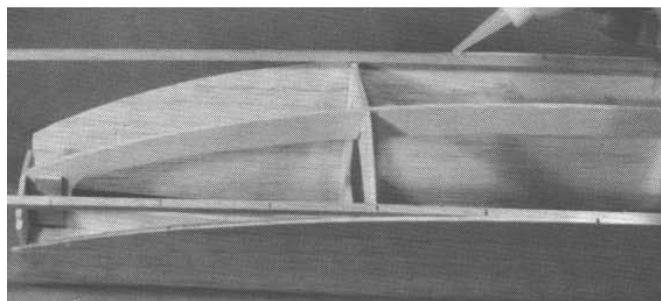
**15.** ☐ ☐ Glue bulkhead "A" to keels.



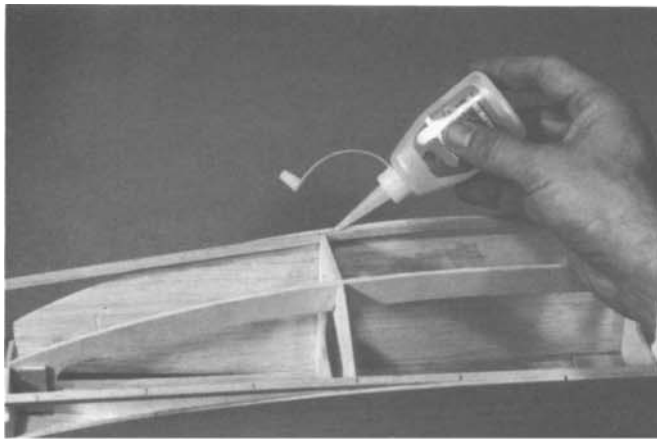
**16a.** ☐ ☐ Measure off 6" from bulkhead "D" forward and mark edge of side. This is the glue limit when first gluing 3/16" sq. balsa in place.



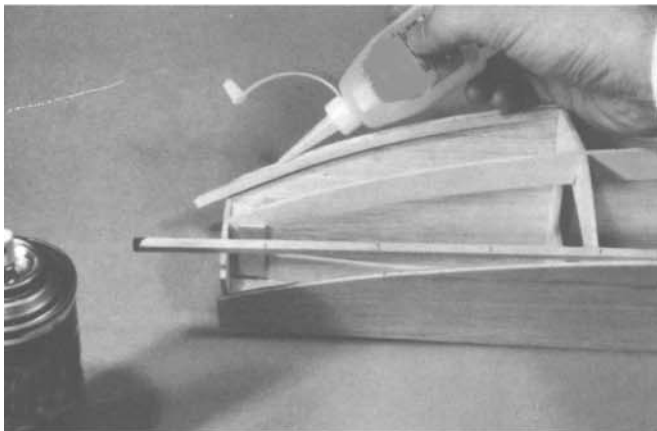
**16b.** ☐ ☐ Mark opposite side the same way.



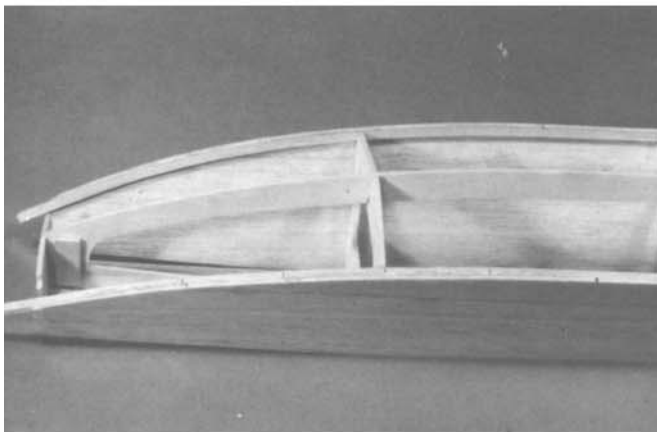
**16c.** ☐ ☐ With 3/16" sq. balsa placed in notches of bulkheads "C" and "D", glue to bulkhead and sides for this straight 6" area. Allow to dry.



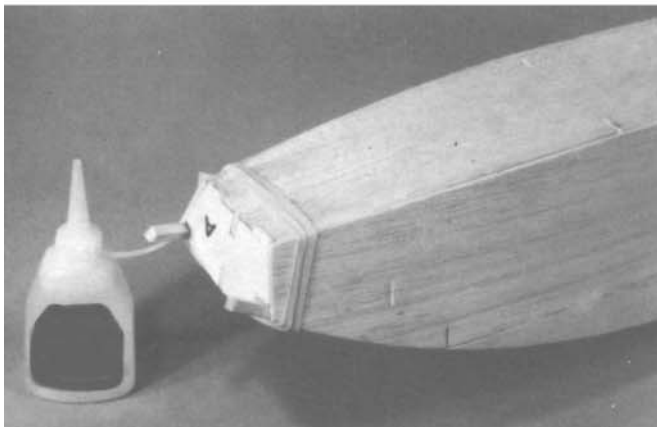
- 16d.** ☐ ☐ Proceed to glue the 3/16" sq. balsa forward in increments of 2" at a time, curving it to complement the sides.



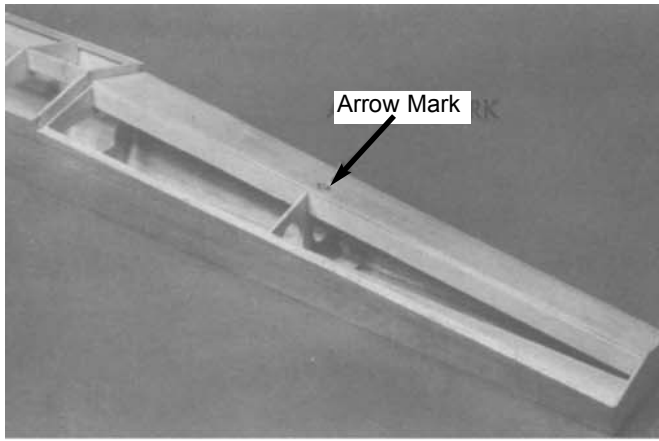
Continuation of step 16d.



Completion of gluing 3/16" sq. balsa to bulkheads and sides.

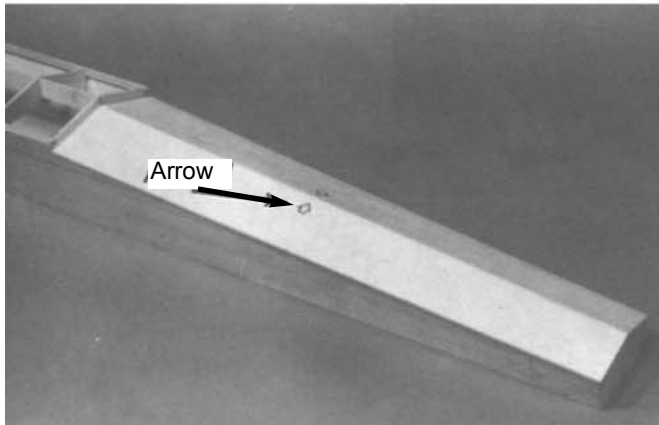
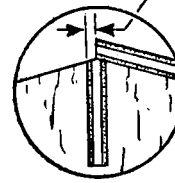


- 17.** ☐ ☐ Join top and sides at bulkhead "A" and glue in place. Small rubber band can hold sides and top in place for gluing. Glue top to keel at the curved portion behind bulkhead "A". Trim off 3/16" sq. balsa protrusions at bulkhead "A". Complete all remaining gluing inside the float since it will be sealed shut with bottom sheeting in the next step.

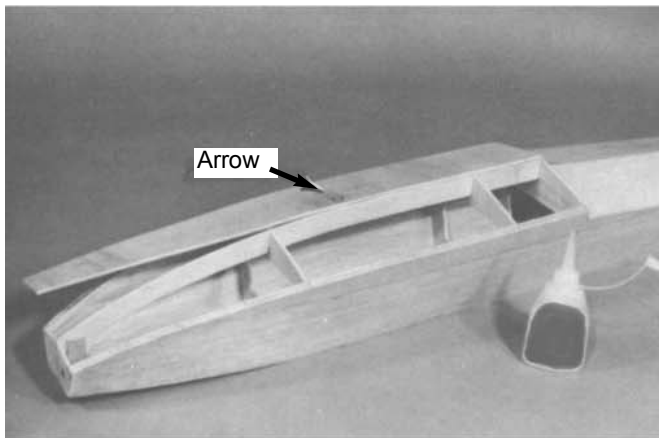


18. ☐ ☐ With float placed flat on table, glue in rear bottom with arrow mark pointing at keel. Use only HALF of keel thickness for gluing bottoms (see sketch below).

SUPPORT BOTTOM ON HALF OF KEEL



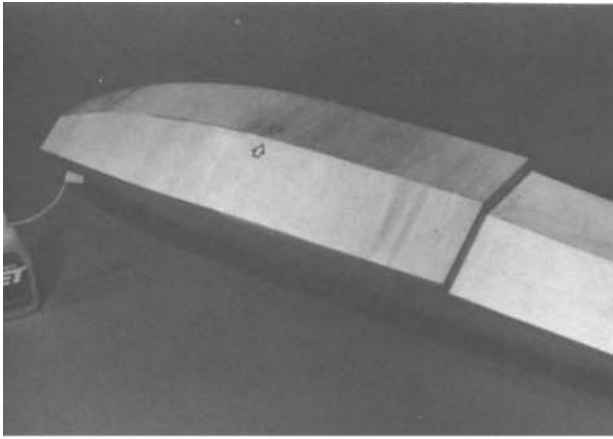
19. ☐ ☐ Add remaining rear bottom again with marked arrow pointing towards keel.



20. ☐ ☐ In similar manner, with arrow towards keel, place front bottom in place and bend it around forward to satisfy how it should fit. Then apply glue to that 6" flat area and bulkheads "C" and "D" and immediately place front bottom in place bending it again around front keel to check alignment—then release and let only rear glued area set to dry.

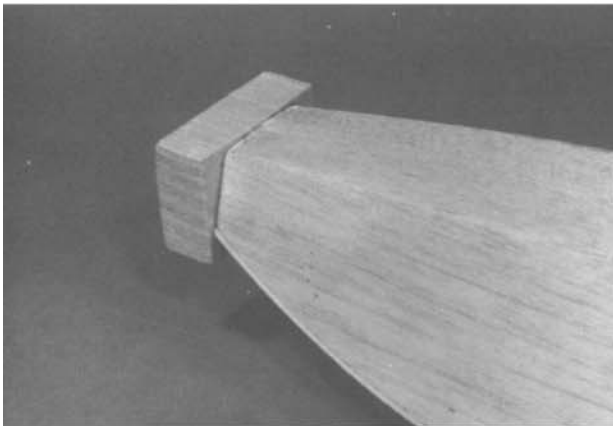


21. ☐ ☐ Complete gluing front portion of bottom in place.

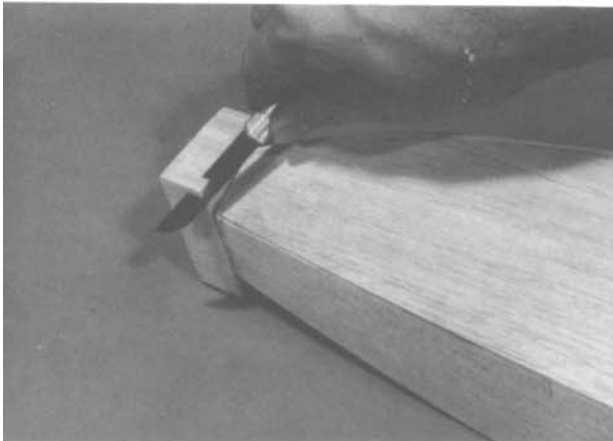


**22.** ☐ ☐ Add remaining front bottom again noting arrow towards keel.

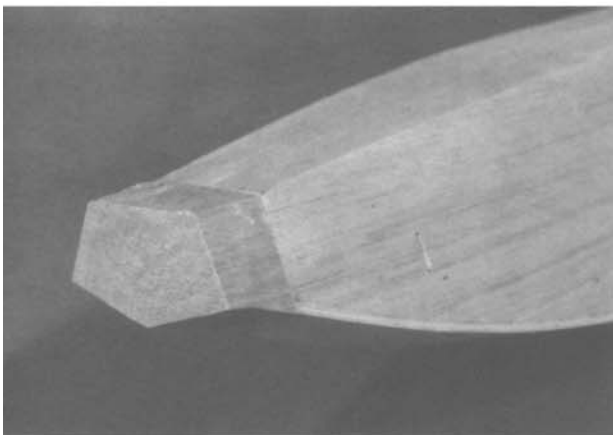
**23.** ☐ Repeat steps 5 through 22 for other float.



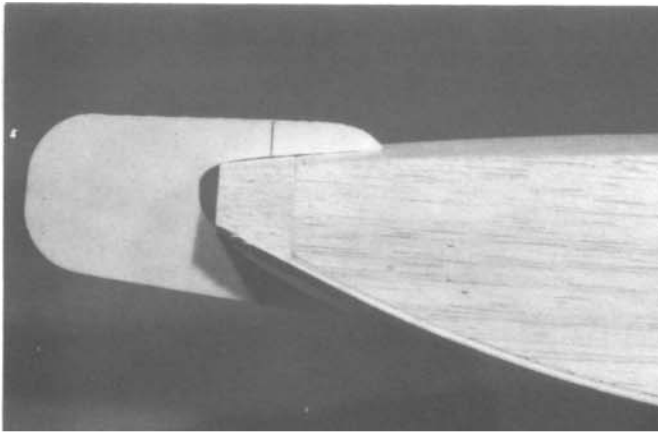
**24a.** ☐ Sand off bulkhead "A" flat as required, and glue balsa nose block in place centered and flush at top as shown.



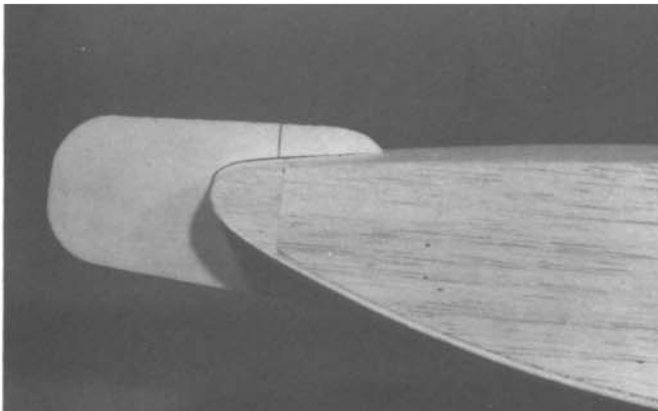
**24b.** ☐ When dry, proceed to trim away nose block to complement the shape at bulkhead "A".



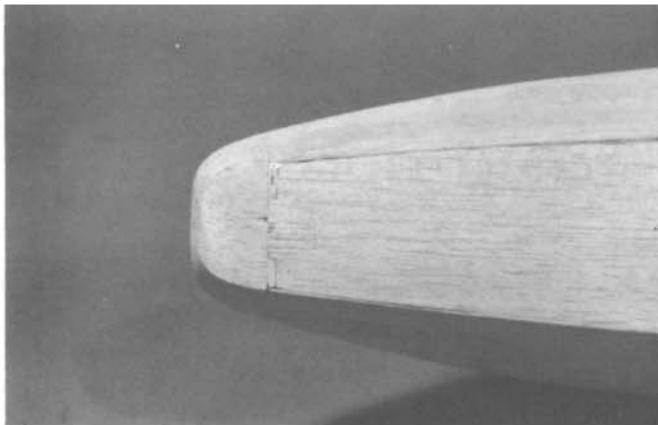
**24c.** ☐ This is the completion of the first stage of trim.



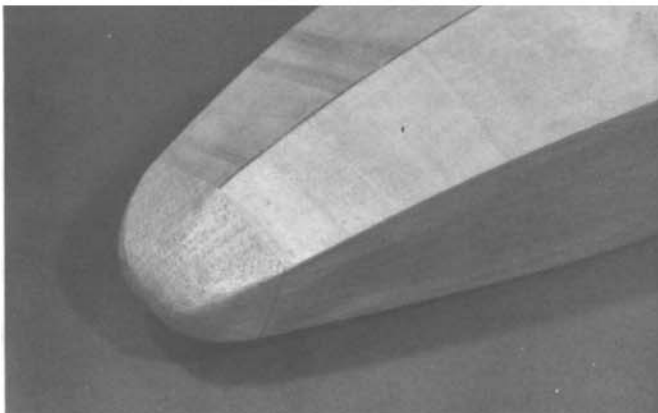
**24d.** ☐ Cut template from page 28 and glue to stiff cardboard. Place template over nose block at center to examine what balsa remains to be shaped.



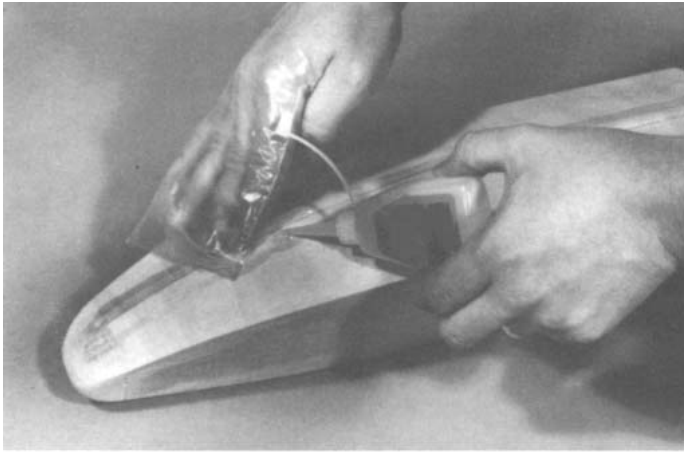
☐ Side view of final shape at center of float.



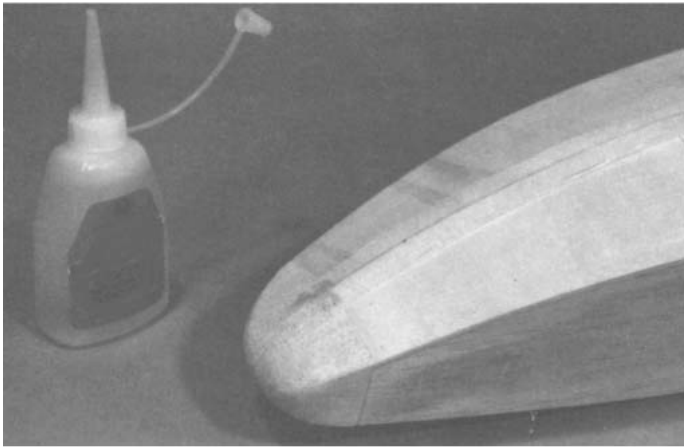
☐ Round off in this view.



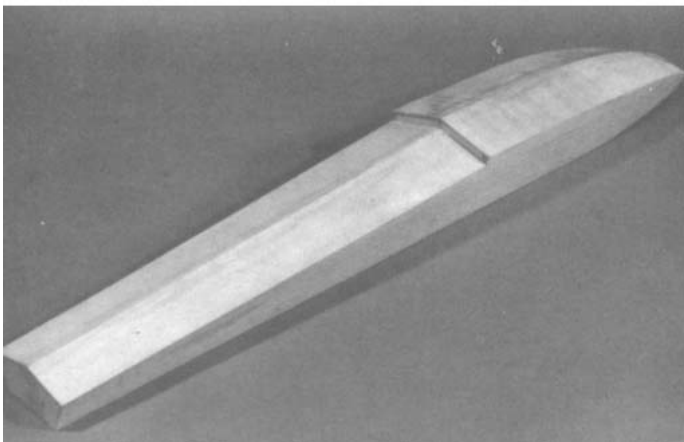
☐ Sanding and shaping completed in this bottom view. Now ready for 3/4" wide nylon fabric seal.



25. ☐ Seal bottom keel joint with 3/4" nylon fabric working from front to rear. Use plastic finger gloves or bag for finger protection while pressing glue through fabric weave.



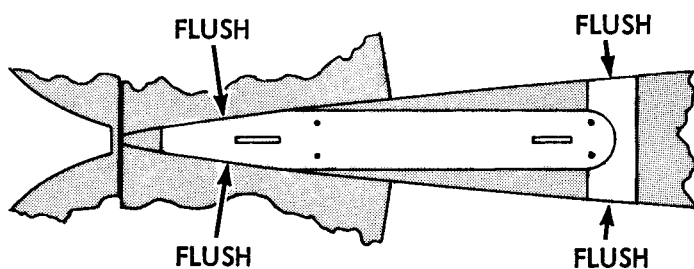
Completed nylon seal.



26. ☐ Seal rear bottom in same manner as front. For added water-proofing, coat entire step area with glue.

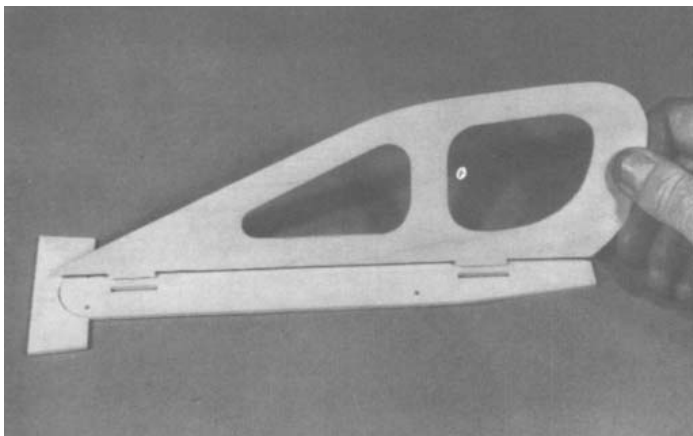
FLOAT ASSEMBLY COMPLETED

## VENTRAL FIN ASSEMBLY

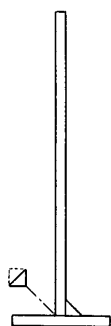


1. ☐ Position ventral fin mount on rear bottom of fuselage flushing as shown. Tape in position.
2. ☐ At four punch-marks in mount, drill 1/16" diameter holes through mount and fuselage bottom.
3. ☐ Remove mount and redrill **only mount holes** to 3/32" diameter.  
☐ Temporarily install four #2 sheet metal screws in **fuselage** holes. Remove these screws and apply a small drop of Instant Jet in each hole to stiffen threads in wood.

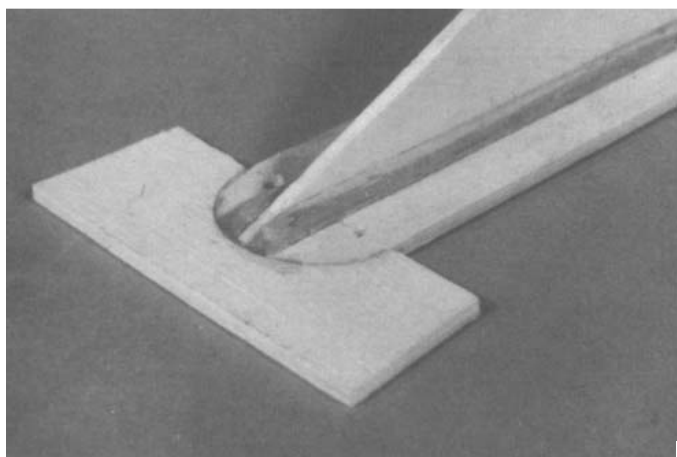
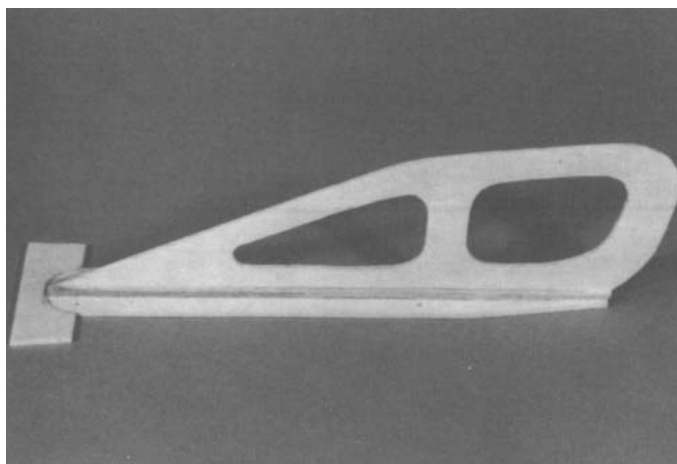




4. ☐ Glue ventral fin to mount, holding fin square to mount as it dries.



5. ☐ Cut 3/16" square x 21" balsa into two 10-1/2" gusset strips. Glue gusset strips on both sides of fin & mount joint (option for better appearance, sand gussets to a triangular shape).



6. ☐ Carefully remove "Flush Tab" and trim excess gusset strips at either end. Smooth edges and finish sand for covering.  
☐ Cover ventral fin as desired.

At this time you have the option of finishing your floats. There is some advantage to sanding and covering the floats now before outer pads are glued in place and therefore in the way. On the other hand, if you paint/cover your floats now, it's possible that the finish might be damaged when drilling and fitting to mount and install the floats. Although the following photos show the floats covered, we recommend that you wait and finish the floats after all drilling etc. is completed.

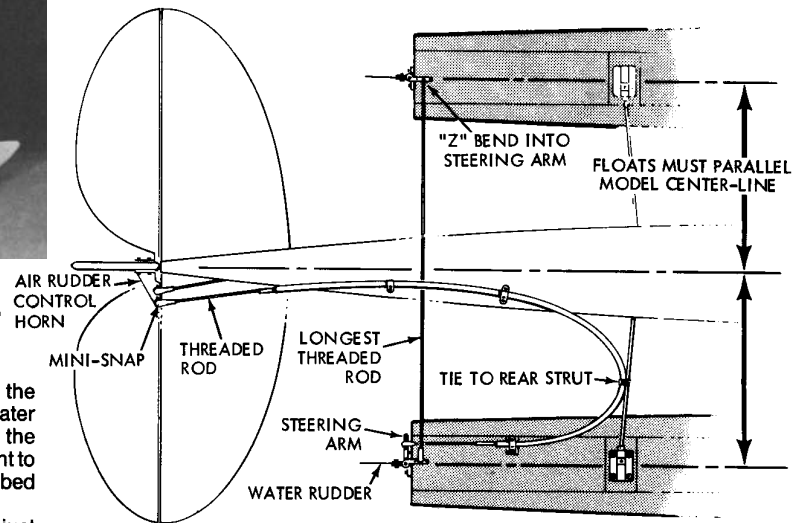
## PREPARING YOUR MODEL FOR FLOAT INSTALLATION



**WATER PROOFING.** We have found other than making sure the floats are absolutely water proof, the plane need only be water resistant. For example, you should use a hooded exit guide for the pushrod. And the fit between the wing and fuselage should be tight to keep water spray out (a seal of silicone caulk works well—as described in Cub instructions).

In fresh water flying if you dunk and get the radio wet, generally just drying it out quickly is enough. If not, then it should be sent to be serviced.

In salt-water flying you must be more careful as salt water is very corrosive. After each flying session rinse exposed parts with fresh water then dry and oil metal parts that may rust. It is also a good idea to wrap the servos in plastic bags like normally done for the receiver and battery pack.



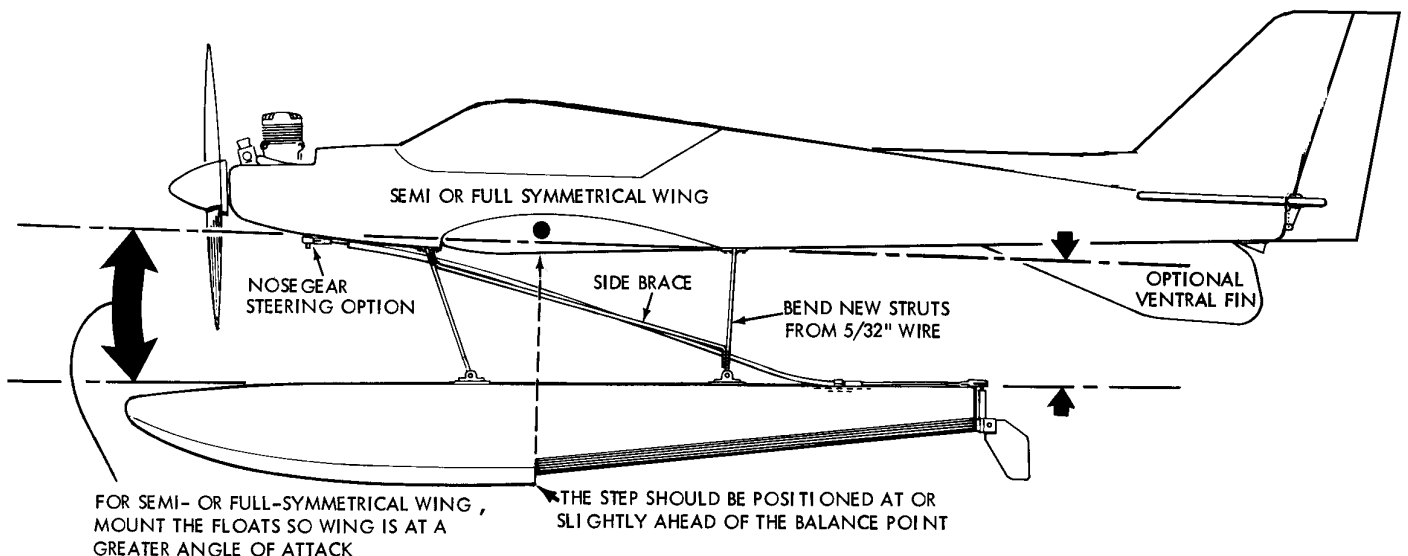
TOP VIEW  
FLOAT INSTALLATION  
OPTIONAL DOUBLE RUDDER  
INSTALLATION

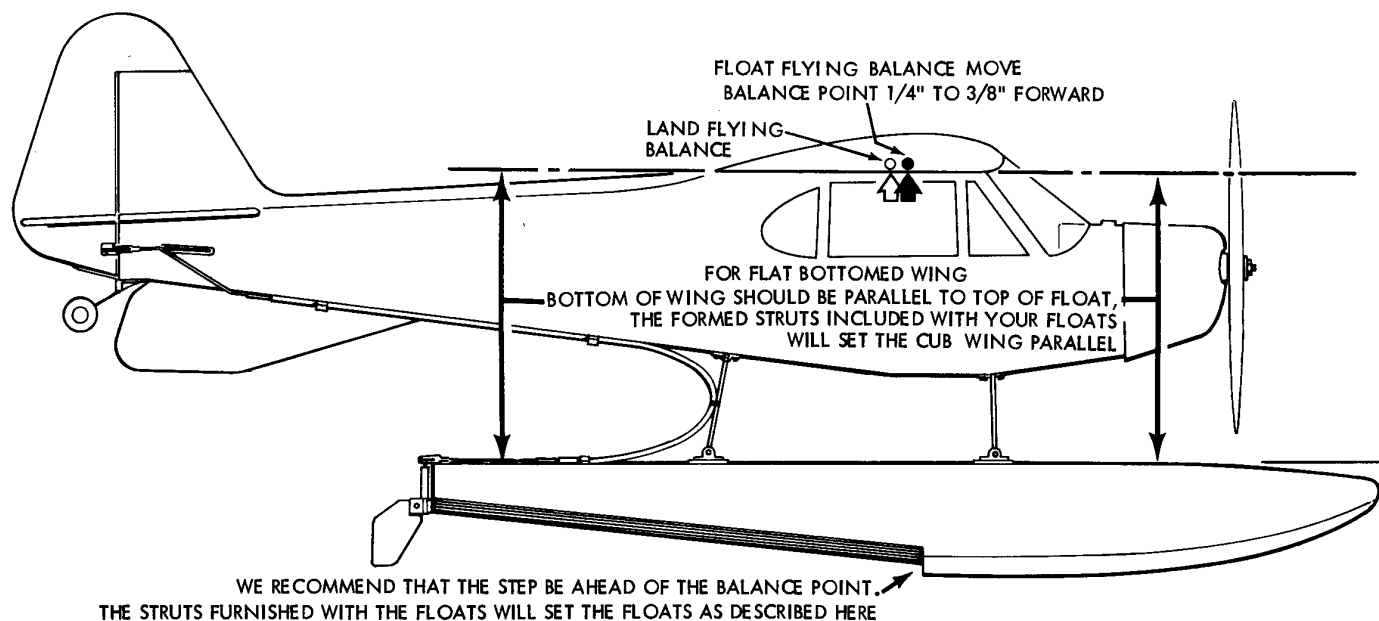
**STRUT ASSEMBLY & MOUNTING**—BEFORE INSTALLING FLOATS, REFER TO SKETCHES ON THESE PAGES TO FAMILIARIZE YOURSELF WITH PROPER FLOAT SET-UP AND MOUNTING

The placement of the step in relationship to the balance point of the plane is also important. To start with, we recommend that the step be near the balance point. We have found that having the step slightly ahead of the C.G. (1/2") works better. And when the step is behind the balance point the plane tends to "stick" to the water slightly.

Another important relationship is the angle that the floats are mounted at. Generally the top of the float and the bottom of the wing should be parallel. Because the Cub has basically a flat-bottomed airfoil, this relationship yields a slightly "positive" relationship to the float. If you were to add positive angle (lower the front of the float) you should find the plane more willing to lift off from the water, but might tend to "porpoise" on landing. Conversely if you lessen this angle the model might tend to "stick" to the water but landings should be fine.

## INSTALLING SUPERFLOATS ON OTHER MODELS

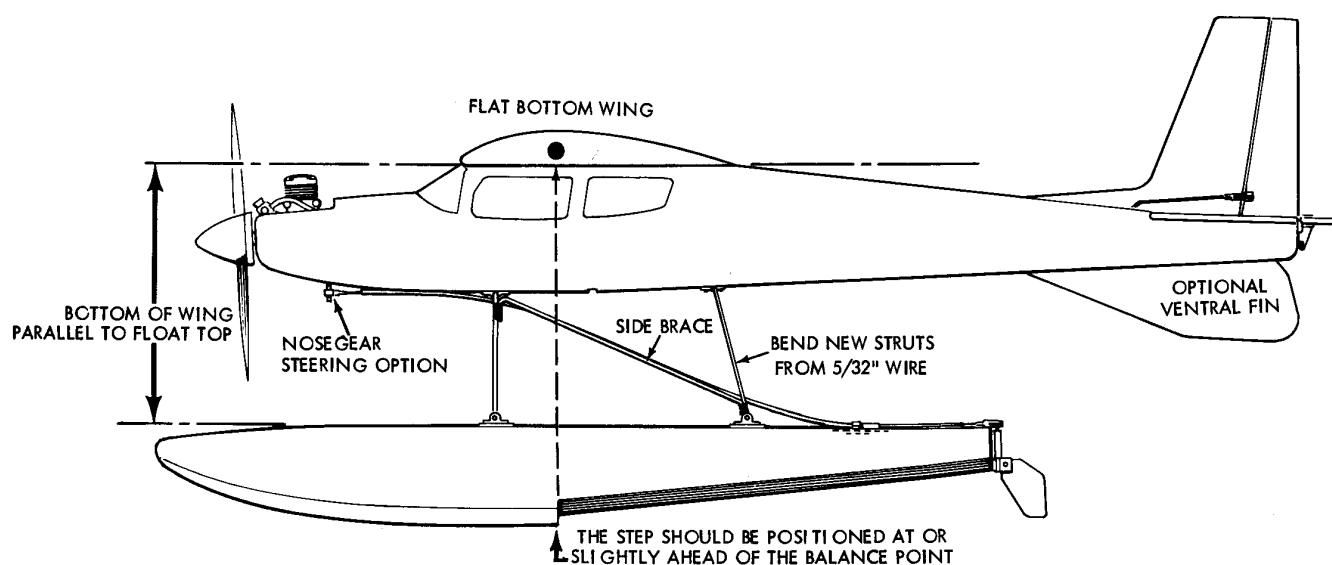




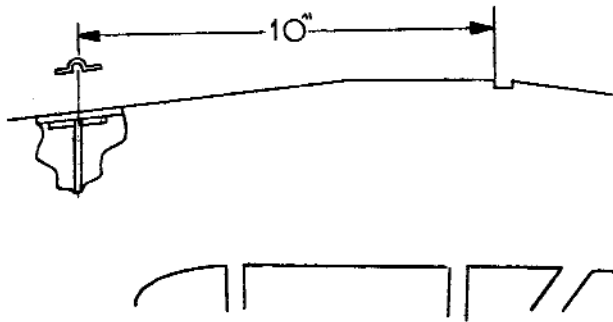
Please note if your model has a semi-symmetrical or full-symmetrical airfoil, you will need additional positive angle to be able to take off and land properly. Also the thicker the airfoil, generally the larger the angle you will require. Some experimentation will be in order to fine-tune your particular model. Float angles can be changed by the addition of plywood shims under the nylon bearings.

It is also important that the floats be positioned far enough away from the fuselage so the propeller will be out of water spray. Keep these points in mind if you are making struts for your particular model.

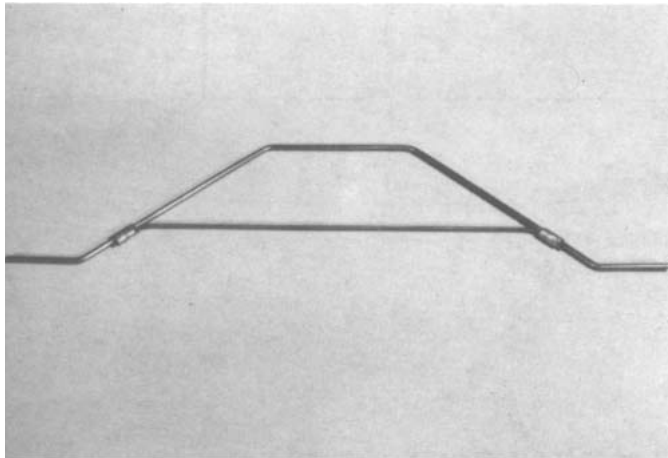
**A NOTE ABOUT FLOAT MOUNTING**—THE ANGLE AT WHICH THE FLOATS ARE MOUNTED WILL AFFECT HOW WELL YOUR PLANE TAKES-OFF AND LANDS ON THE WATER. IN OUR TESTS, THE CUB FLEW BEST WITH THE FLOAT TOP PARALLEL TO THE WING BOTTOM AS SHOWN IN THE LARGE SKETCH ABOVE. THE WIRE STRUTS INCLUDED WITH YOUR FLOATS ARE DESIGNED TO SET THE FLOATS PARALLEL AS SHOWN.



## Float Installation Eagle 63

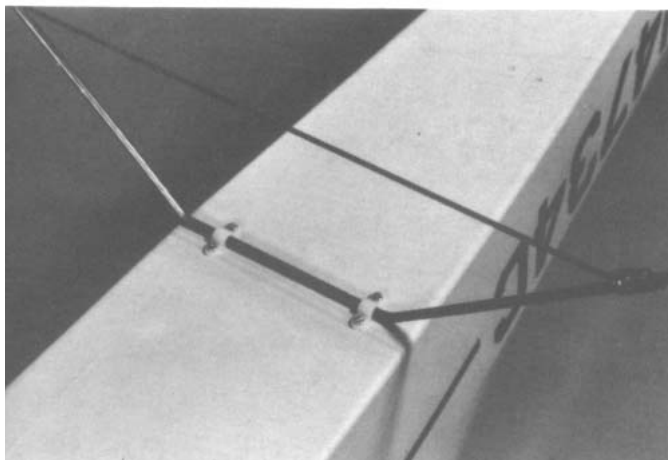
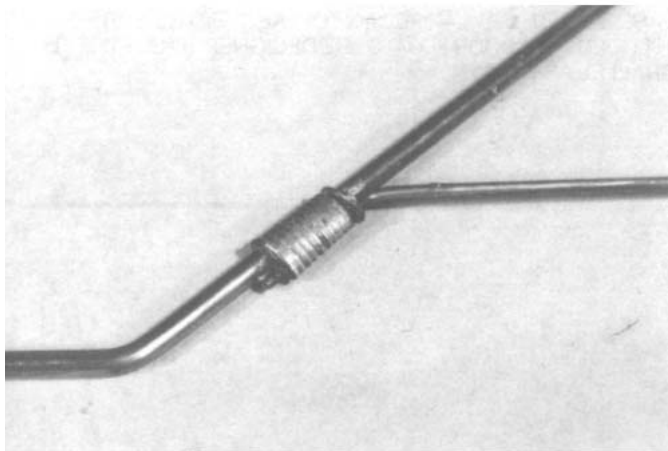


1. ☐ From scrap ply, cut two reinforcing strips  $1/2" \times 4-1/4"$ . Glue these strips inside the fuselage flat to the bottom, one strip in front of former "D" (cabin rear) and one behind it.
2. ☐ Remove present landing gear struts and save them for "wheel" operation.
3. ☐ From right rear of landing gear slot, measure straight back 10" and mark this location. Then measure and mark 10" back from left rear edge of slot.
4. ☐ Install new wider front struts in fuselage using nylon straps and screws from stock gear.

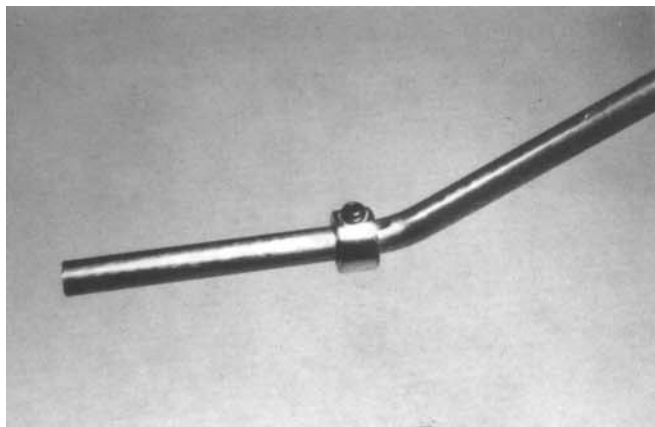


**SOLDERING**—If you are not familiar with soldering, the basic procedure is described here. First, prepare by wiping areas to be soldered with steel wool or fine sandpaper so metal is clean and bright. Position parts to be joined and bind them tightly together with wire. When satisfied with fit between parts, apply heat directly to joint area and get it very hot—this is important. When thoroughly heated, touch the solder to the area and solder should melt into and fill the joint, producing a strong bond. A good solder joint will have a bright shiny appearance.

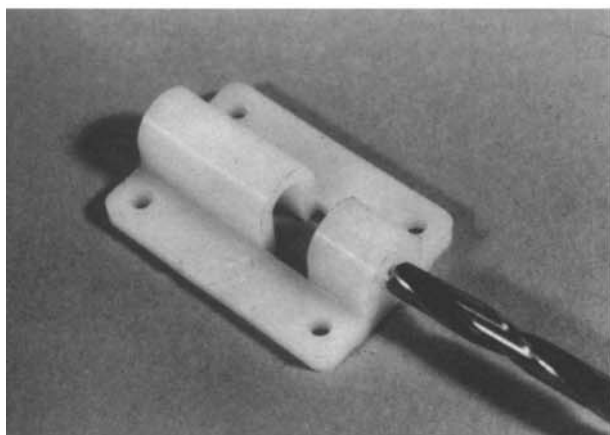
5. ☐ **SOLDERING FRONT BRACES.** Position  $3/32"$  diameter cross brace wire behind front struts and adjust for best match of brace bends with struts. When satisfied with fit, bind together with wire and then solder.
6. ☐ Solder second cross brace behind rear strut.



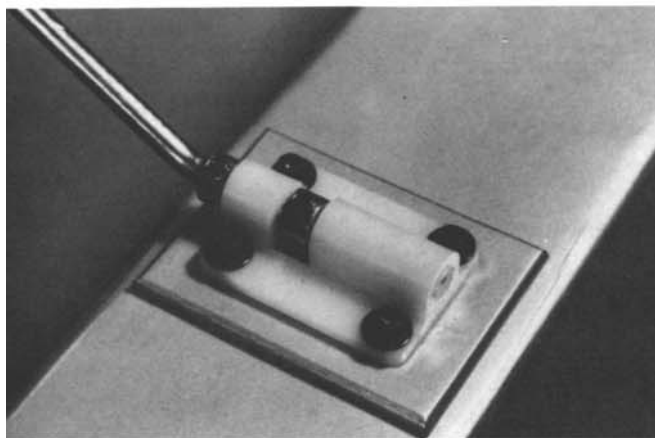
- ☐ Place nylon landing gear clamps on flat center area of rear strut wire, near each bend. Align rear strut wire over marked locations from previous step, mark clamp hole locations on fuselage bottom. Drill four  $1/16"$  holes and using #2 x  $5/16"$  sheet metal screws, attach rear strut to fuselage (after installing screws, remove them and add a drop of Instant Jet to stiffen threads in wood).



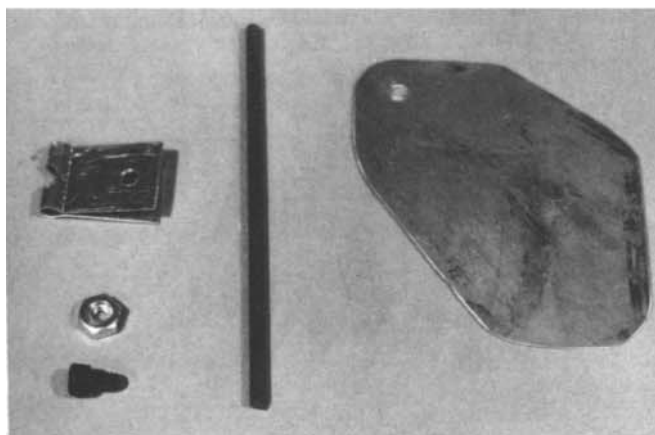
7. ☐ Slide on 3/16" steel collars and tighten set screw to hold in place on front struts.  
☐ Install 5/32" steel collars on rear axles.



8. So that all surfaces are unobstructed for sanding/covering later on, do not glue the outer pads to the float top at this time.  
☐ Enlarge the center hole in **two** of the four large nylon bearings to 3/16" diameter.

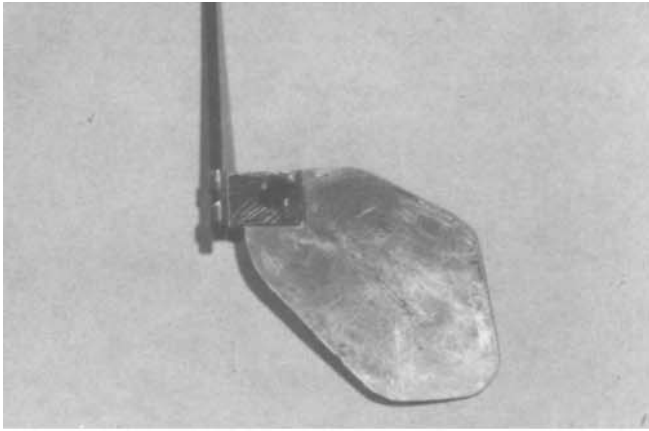


9. ☐ Install one 3/16" drilled nylon bearing and outer mounting pad at front float hole location using four #4 x 1/2" socket head screws. Do not over tighten as you will remove later for covering. Install second 3/16" drilled mount on front of other float (position bearings so that the slot for the locking collar will be towards the center-line of the model).  
☐ Attach two remaining large nylon bearings and pads at rear locations.  
**IMPORTANT!** Refer to TOP VIEW on page 18 about setting floats parallel to model center-line, also read paragraphs about setting up floats.  
☐ Install floats on strut axles, clamp in place with collars in bearing slots.

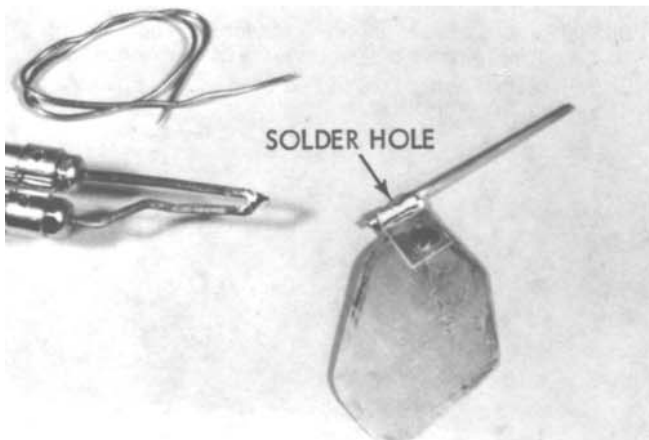


### **WATER RUDDER ASSEMBLY, INSTALLATION AND PUSHROD HOOKUP**

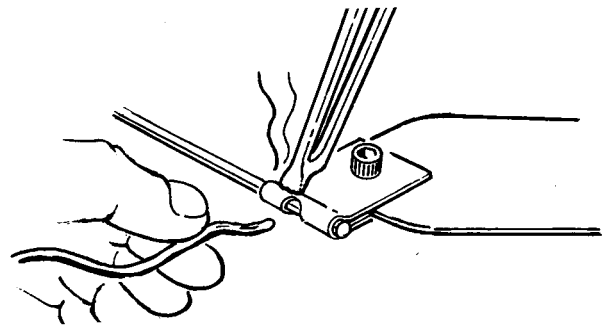
Water rudder parts ready for assembly consisting of rudder pivot, pivot wire, rudder, 4-40 x 3/16" socket head screw and 4-40 hex nut.



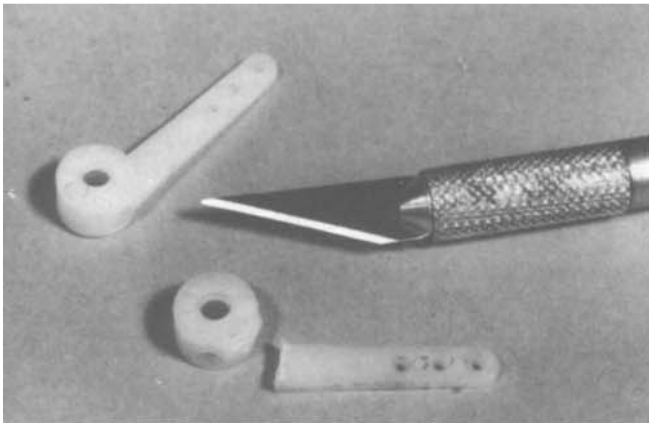
1. ☐ Parts assembled for soldering. Pivot screw should be snug, not loose. It should be tight enough to allow the rudder to rotate if it strikes an object at speed.



- ☐ Important; be careful not to get solder in rudder area—as it must swing free. Solder pivot to pivot wire through hole in pivot.

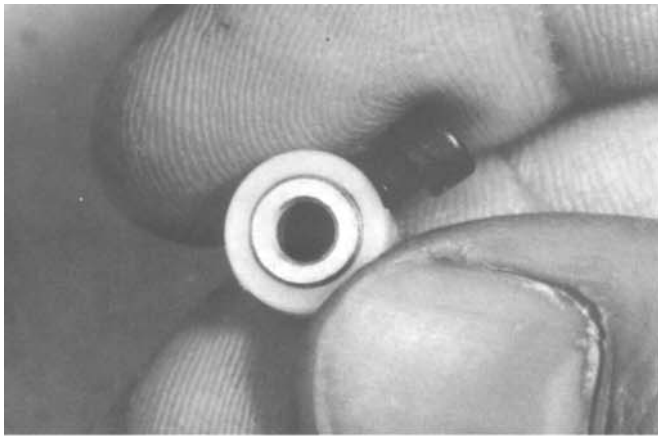


2. ☐ Cut arms from only **two** steering arms. They are used to clamp the rudder pivot wire in the bearing.

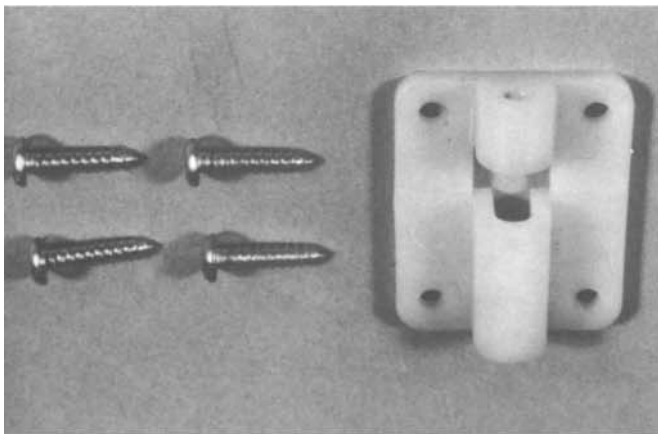


- ☐ Insert 1/8" I.D. steel collars into cut-down steering arms (side holes must be aligned). Insert remaining steel collars into remaining nylon arms.

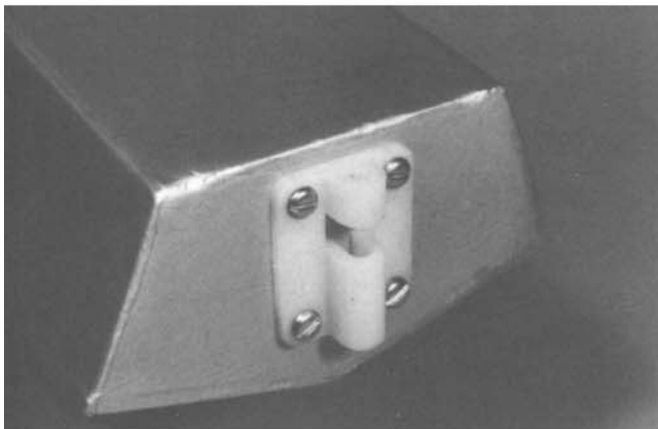




☐ Thread a #4-40 x 3/16" socket head screw partially into each steel collar/nylon arm assembly.

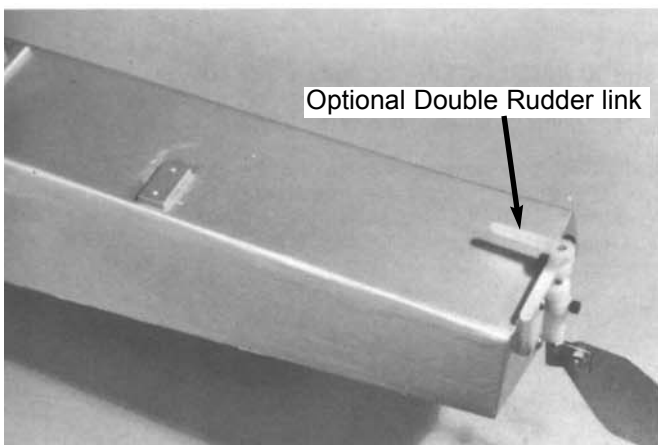


3. ☐ Prepare to fasten the small nylon rudder bearing to rear of the float with four #4 x 1/2" pan head sheet metal screws.



- ☐ Attach rudder bearing to the rear of the float that you have already pre-drilled. Before installing screws, apply a dab of silicone bathtub caulking to screw threads for water seal.

4. ☐ Place a cut-down nylon/steel collar in bearing slot and insert rudder pivot wire through bottom of bearing and collar. When rudder pivot touches bearing, tighten collar screw with Allen wrench.

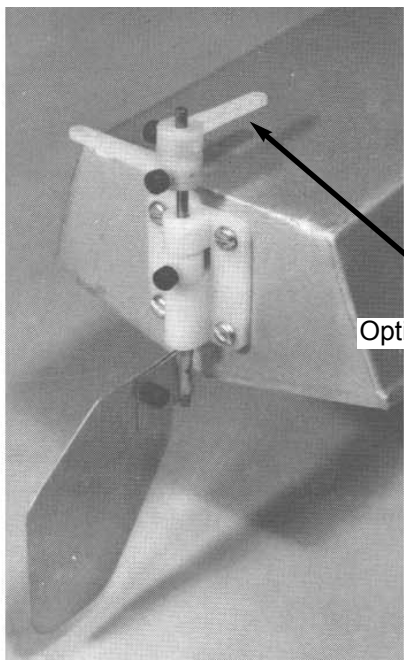


#### For Optional Dual Rudder

- ☐ If your model's air rudder control horn is on the right side, install two nylon steering arms on the right float rudder wire as shown (if horn is on the left, install both arms on left float). See float top view on page 18.

REFER TO PAGES 18 AND 19 FOR ADDITIONAL DETAILS ON LINKAGES.

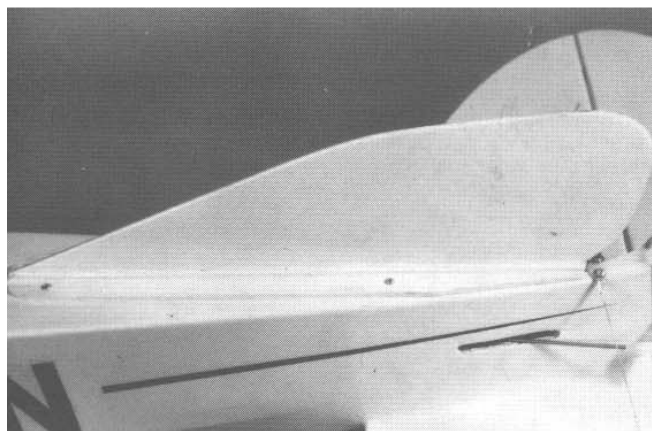
PHOTO OF RIGHT FLOAT



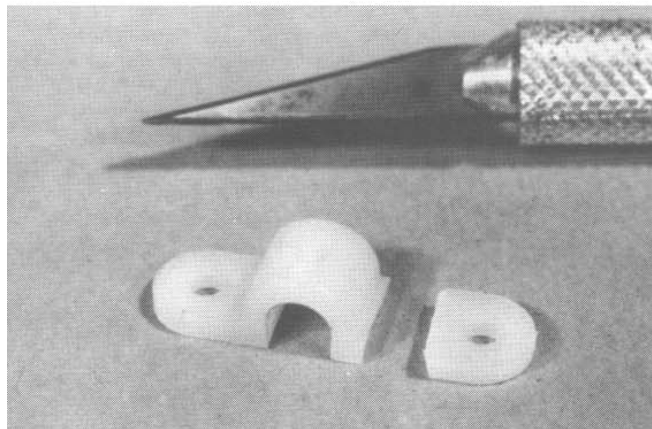
#### E UP VIEW OF RUDDER INSTALLATION

- ☐ Install remaining steering arm on other float wire.

Optional Double Rudder link



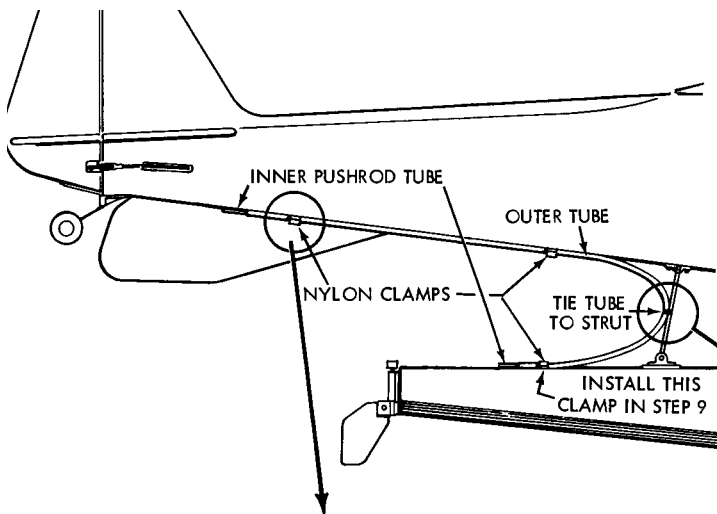
- ☐ Attach covered ventral fin to fuselage through pre-drilled holes with four #2 x 5/16" pan hd sheet metal screws.



**PUSHROD INSTALLATION** (For models with nosegear steering, use the pushrod system shown here, but drive the pushrod from the nosegear as shown on bottom of page 18 & 19).

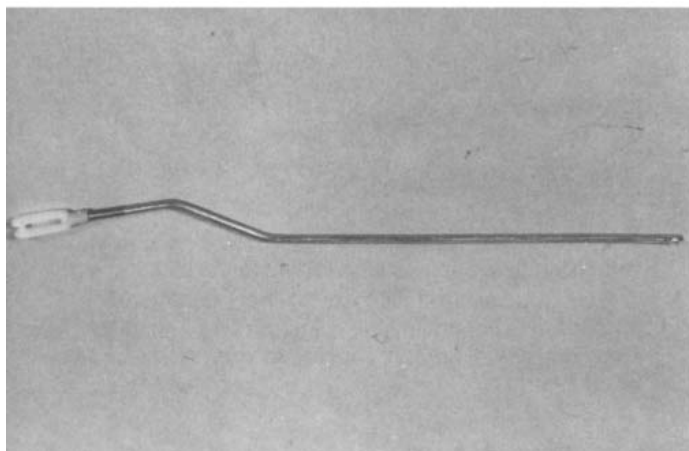
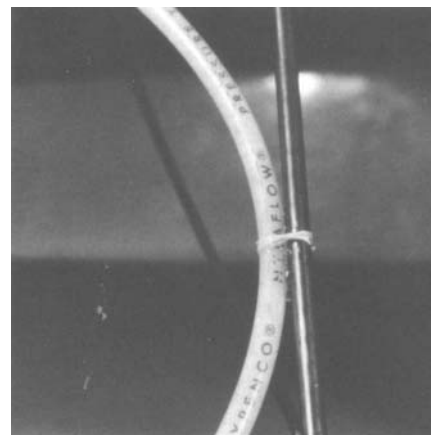
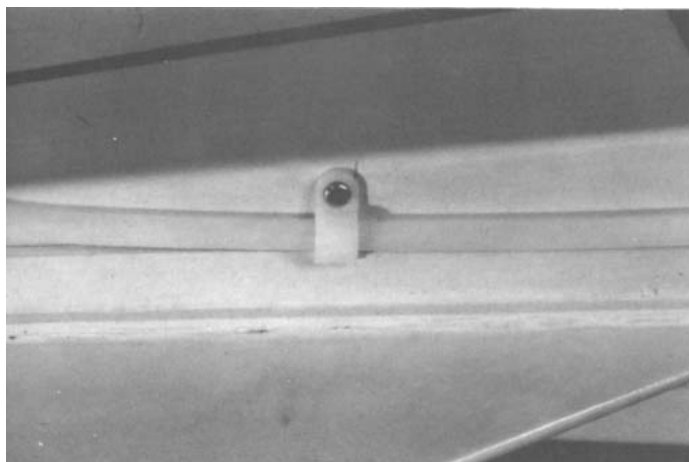
5. ☐ Cut off flange from one side of **one** nylon clamp. Use this clamp and a #2 x 5/16" sheet metal screw to attach the larger diameter nylon tube to the fuselage bottom next to the ventral fin (see step 6).



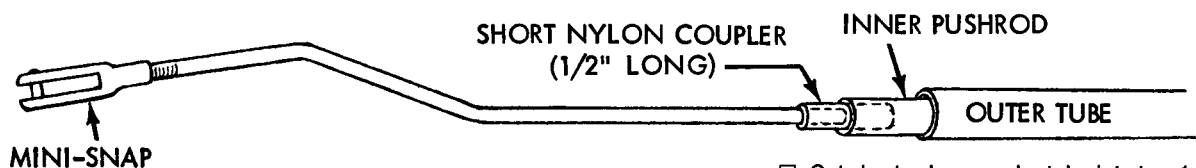


strut and back towards the water rudder steering arm (make sure your steering arm is positioned for correct rudder steering). Hold tube in position to fuselage and strut using clamps and thread as shown (do not install float clamp until pushrod hookup is completed below).

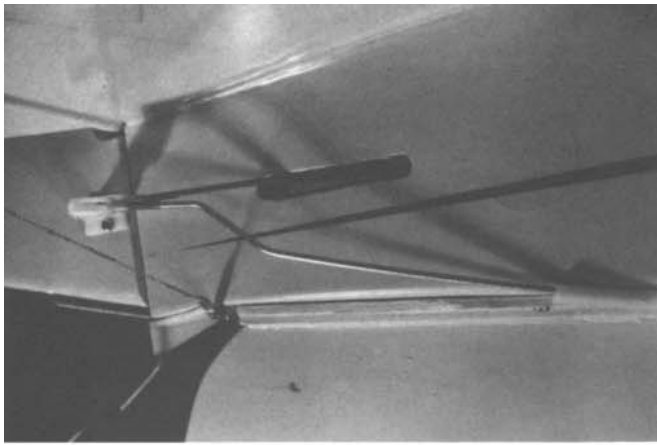
- ☐ Slide the inner pushrod tube through the outer guide tube so inner tube protrudes equally from both ends.



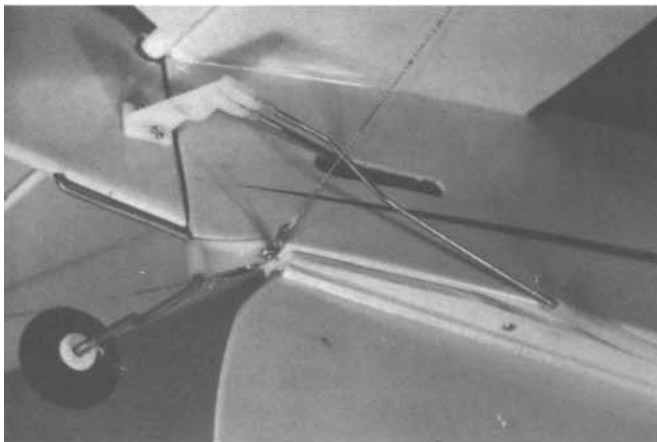
7. ☐ Thread a Mini-Snap on one 10" threaded rod and connect Mini-Snap to the outer hole of the rudder control horn. Make a gentle "S" bend in the rod as shown to align the rod with the inner nylon tube. Cut rod long enough to butt against end of pushrod tube.



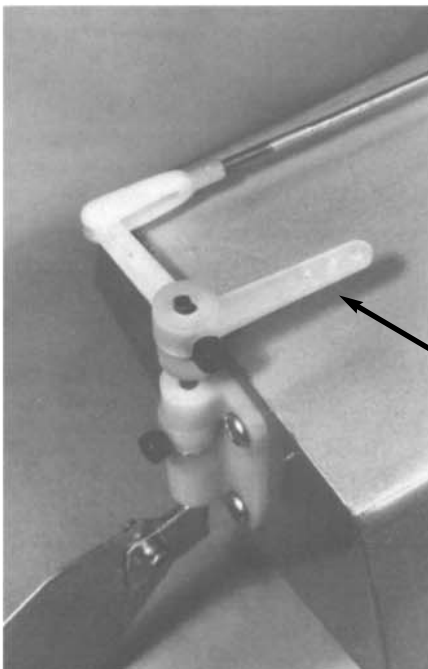
- ☐ Cut short nylon coupler tube into two 1/2" lengths.
- ☐ Sand cut end of wire and glue 1/4" of it into coupler (it will be a little tight). Let dry.
- ☐ Sand end 1/4" of nylon coupler and glue into nylon pushrod.



Finished hook-up: control horn to nylon pushrod.

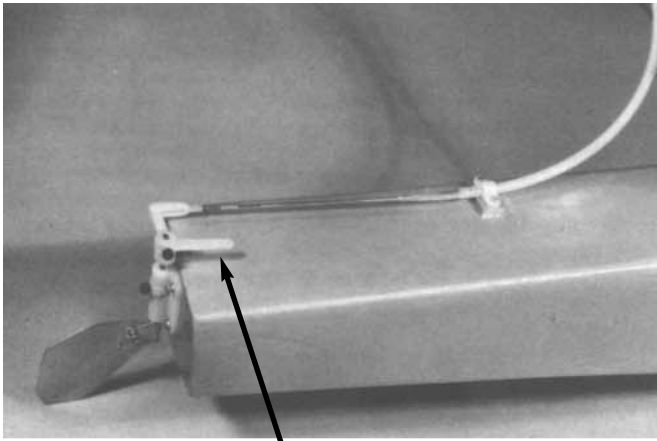


And another view.



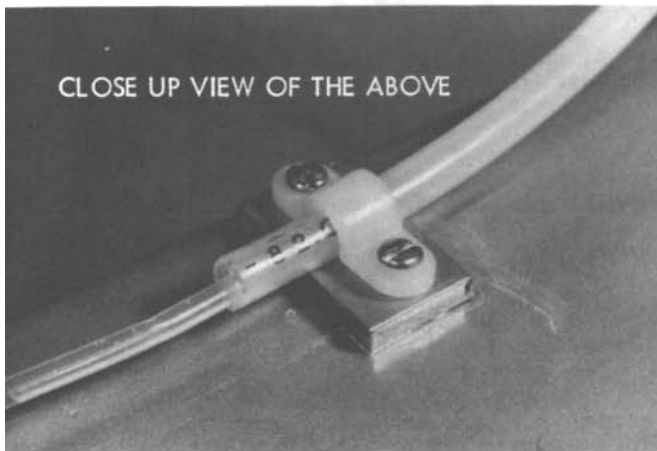
Optional Double Rudder link

8. ☐ Thread second Mini-Snap on remaining 10" rod. With rudder pointing straight back and steering arm pointing straight off to the side, attach Mini-Snap to steering arm.
- ☐ Lead rod forward to align with inner pushrod tube.
- ☐ Cut rod to length so it butts against inner pushrod. Using remaining coupler tube, connect rod to inner pushrod as you did in step 7.

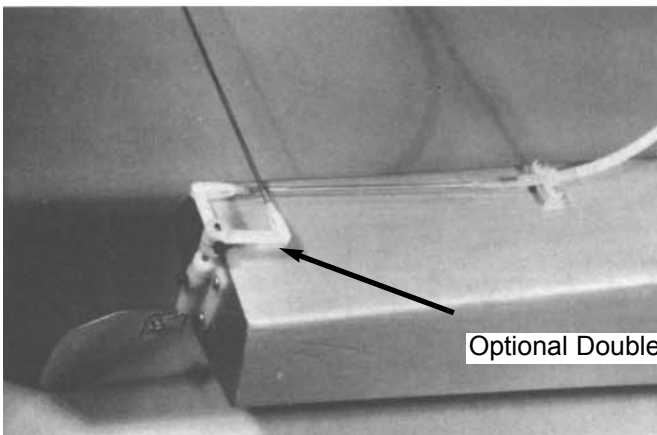


Optional Double Rudder link

9. ☐ Before installing remaining nylon clamp, glue ply mounting plate to float top (the ply is a more durable material for the clamp screws than the balsa top).

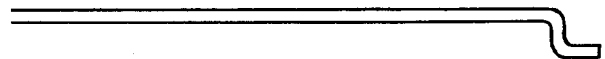


### Optional Dual Rudder



Optional Double Rudder link

10. ☐ Thread a mini-snap on remaining long threaded rod, then attach mini-snap to steering arm.  
☐ With both rudders pointing straight back and steering arms pointing straight ahead, bend other end of rod down into hole in other steering arm. To secure rod in arm, make a "Z" bend 1/4" down from the first bend and cut off excess as shown.



FLOAT INSTALLATION COMPLETE

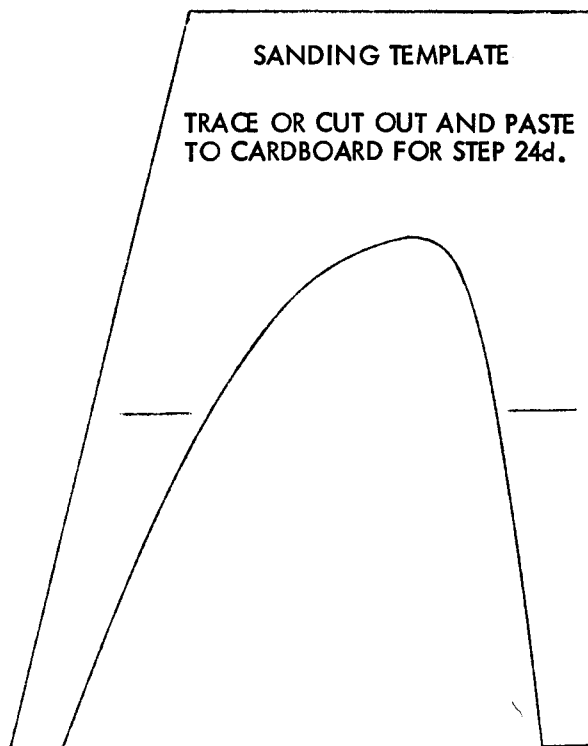
## COVERING & FINISHING

Our test floats were covered with a plastic film covering material. An iron is used to activate the heat sensitive adhesive and press the covering permanently on the float. Covered in this manner, floats will be adequately water-proof if not abused (no beach landings, etc.).

For a more durable water-proof finish, seal the float with a good coat of polyester resin. It will dry to a hard surface in about an hour, and then can be lightly sanded for a smooth finish. The floats can then be painted with a fuel-resistant paint such as Epoxy or polyurethane enamel (or covered as described above). Epoxy paints are to be carefully mixed before using. Polyurethanes however, can be used right out of the can—no mixing, but depending on the humidity, they may be slow to dry.

- ☐ Remove all bearings, clamps etc. so all float surfaces can be waterproofed.

- ☐ For a smooth, good-looking final appearance, you should carefully sand, fill nicks and dents, then final sand. Model Mate Model Filler is highly recommended. Any irregularities in the wood surface will show in the final finish, so a smooth sanding job is a must for good appearance. For final sanding, use fine sandpaper (grade 240 to 320) and a sandpaper block.
- ☐ Remove all sanding dust from surfaces using a "back-rag" or vacuum. Paint or cover floats and four outer pads.
- ☐ Permanently attach outer pads as follows. If floats are covered, carefully remove covering from top of float in pad areas to provide wood to wood glue joint between float top and pads. Then coat threaded portion of #4-40 x 1/2" Soc. Head Machine Screws with vasoline. Place four screws and washers in one pad. Apply glue to float top, align screws in float, gently tighten screws clamping pads in place.



## FLYING THE CUB WITH FLOATS

As mentioned in the introduction, the ventral fin is recommended. We have flown the model both with and without quite successfully, but as with some full-size Cubs the ventral fin helps the plane fly better.

The placement of the floats is very important. Take time to recheck alignment and balance (refer back to pages 18 and 19 for details). Also when floats are added you must move the balance point forward 1/4" to 3/8" of an inch.

When taxiing, always hold full up elevator. This helps in steering and also helps keep the water out of the propeller and engine. If you don't your engine may stall and you may be in for a quick swim to get your model back!

Always take-off and land into the wind. To take-off simply aim the aircraft into the wind, add power smoothly, holding full up elevator for the first 20 or so feet of the take-off run. Then slowly release the "up" to about 1/4 elevator. Keep it at this position. When the plane is ready to fly it will simply take off and you are flying! Remember, during the take-off run you should try to keep the plane into the wind with rudder. Be careful not to use too much rudder. Be gentle and smooth on all controls.

Flying around you should notice some differences such as more drag and the added weight. However, we have looped, rolled, and made exciting low inverted passes with floats with a .60 2-cycle Cub. Properly powered there will be plenty of performance left.

In some ways landing on water is easier than on land. It is hard to miss the runway! Your approach should be conventional but with a bit more power (due to the added drag). Don't do a full stall type landing, instead "fly" the plane on with just a little extra speed. Just before touch down have the power down to low idle. It will look so good you will find yourself practicing touch-and-goes all afternoon!

GOOD FLYING!



### Supertote

Designed so your equipment is right where you want it. And with its balanced load and narrow profile, it's easy to carry. Precision cut materials and complete hardware package.



### Model Mate

A stronger, light weight, non-shrinking filler to use with all modeling woods, foam and fiberglass.