

# 1/12<sup>th</sup> Scale Sport Hydro 1969 Notre Dame

## Assembly instructions

### Preparation:

Cut the parts from good quality wood, exactly to the template outlines. I recommended 1/8" safety stock on the deck outline for variations during assembly. The outside sheets will be laminated with 1/64" birch ply "wing skin". Do this before assembly with the plywood cut oversize. Coat the outside of the balsa and the inside of the ply with 3M-77 or wing-skin contact cement. Make a left and right side of each. Allow to set up per manufactures instructions then press the parts together flat. Trim to the final shape after the parts have set up. Test with scrap parts first if this is your first time with this. Add cross grain balsa and ply doublers to the inside of the tunnel sheets before assembly, as shown on the plans (sheet-2).

### Hull:

On a 6.66"X32"X1.25" building board, (covered with wax paper) tack glue the rear tunnel sheet. The front tunnel sheet is blocked up .68", .62", .45" & .23" as shown on sheet-2. The stringers will have the 1/64" ply facing the inside of the tunnel and 1/8" square balsa sponson base braces on the other side. Add 1/16" non-trip braces to bulkhead C. Assemble the stringers and bulkheads A, B & C. Make sure these are square and even then tack glue in place. Glue bulkheads D, E and the transom. Bevel the front of the 1/8"X3/8" deck strips and glue in place. Bevel the bottoms of the rear non-trip sheets (right & left) and glue in place. Check the alignment and final glue all joints. Pop the tack-glue spots loose with a long thin knife blade.

Curve the left and right sponson bottoms to match the curve of the bulkheads by dipping in water then bend while heating with an iron. Glue these in place. Bevel the bottom curve of the sponson sides, curve and then glue in place. Glue the inside sponson doubler to the right of bulkhead C. Sand the tops of the bulkheads, stringers and sides, if needed, to a smooth profile for the deck.

The hull may warp while gluing the bottom sheeting. Before the deck is installed, lay the hull on a flat surface. If the transom is not level with the sponsons, block the transom up level with a small shim under the low side, then glue the deck sides while the hull is tack glued to the building board. If there is still a warp, again block the transom level and secure the hull to the board while gluing the front and rear center deck sections in place. After these are on, the hull cannot be twisted to correct for warps.

### Deck:

The deck sides are glued with contact cement. Put wing skin contact cement on the tops of the bulkheads, stringers and side panels. Add contact cement to the inside of the deck (right & left). Let this set per manufactures instructions. Carefully touch the deck down with the inside edge centered in the deck strip at bulkhead C. With the deck edge aligned to the strip center-line, lay the deck down along bulkhead C to the outside of the hull. Then pull it down to meet the rest of the open structure. Add CA to the outside seams. Trim the outside deck edges to a smooth profile with the side sheeting. Add sponson and

transom doublers. Remove the centers of bulkheads C and D as shown then add the rear stringers, floor brace, front and rear cross braces and center deck sheets.

#### Hatch:

Build the hatch cover from sections of 3/32" balsa assembled to match the curve of the deck and to fill the opening between the sides of the deck around the hatch supports. Laminate 1/64" ply to the top of this to harden the top surface. Cut 3/8" balsa sheets to the contours shown for the cowl then carve and sand the cowling to shape. Add the fin, headrest and the balsa V-12 motor.

#### Driveline:

Bend 1/8" OD brass drive tube to the curve on the plans. Cut and solder 5/32" OD tube for the stuffing box and lube fitting. If you want to make a strut, instead of buying one, cut 1/16" X 3/4" brass sheet for the strut blade. Solder this to 1/4" and 9/32" OD tubes for the strut assembly. Slip a 2" piece of 7/32" OD tube inside this for a propeller bushing. Line this up as shown in the side view and glue the stuffing tube in the hull. Line up the strut to position the propeller trailing edge centerline 1.67" behind the transom and .83" below the bottom. Position the motor so the coupler lines up with the wire drive shaft. Mount the rudder and turn fin as shown.

#### Finish:

Sand, fill with spackling paste and sand again. Spray sanding sealer, sand and repeat until the finish is smooth. Spray one or two coats of gloss white, add the trim and logo, then spray a coat of clear over everything. Add details like windscreen, driver steering wheel and gages as desired. Note, this hull can also be made into the Bud, Bardahl, Timex etc.

#### Running:

This hull can be set up for 12 cells or 15V Lipo and a "Speed-700" motor. It can also be powered with a brushless system for P-Sport Hydro. An X642 to X645 propeller will move this boat very well. With strong batteries and well broken-in 700 motor, an X646 could be cut back to 44mm that may provide more speed.

