BRIDI HOBBY ENTERPRISES

PRESENTS

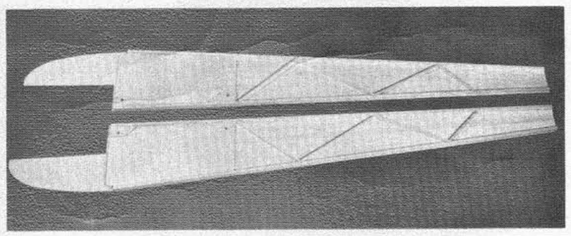
THE RCM BASIC TRAINER

designed by
Dick Tichenor

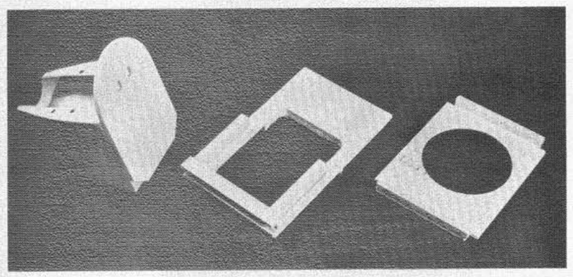
Here is a small, easy to build radio controlled model airplane designed primarily for the beginner. This aircraft was selected by R/C Modeler magazine from numerous designs as the ideal basic trainer to be featured in the RCM Flight Training Course.

Construction techniques are simple in order to get you in the air quickly. The aerodynamic design was carefully considered to provide the inherent stability desired to keep the newcomer out of trouble through his learning stages. The experienced flyers find the RCM Basic Trainer affords a welcome change of pace from the big and heavy ships, as it is a real fun airplane to fly!

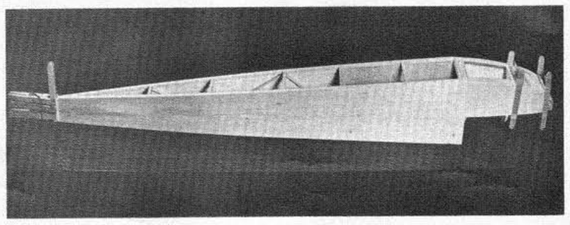
Our recommended construction proceedure is illustrated even though we feel the plans are self-explanatory. We do emphasize that careful workmanship thoughout the construction stages pays off at the flying field - don't be afraid to use sandpaper.



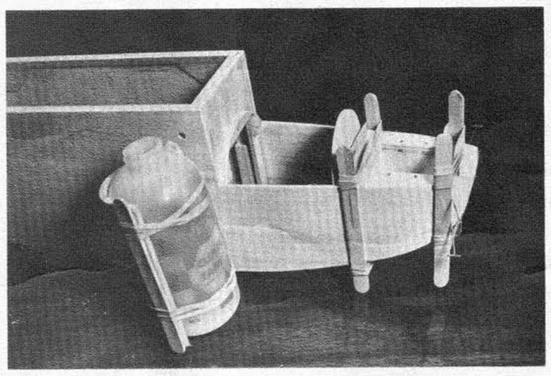
Fuselage side sheets are cemented together. Doublers are cemented to the side panels in the cabin area and stiffening strips are added. The 1/16 plywood wing support doublers are glued to the top of the balsa doublers. Be sure to make a left and right assembly.



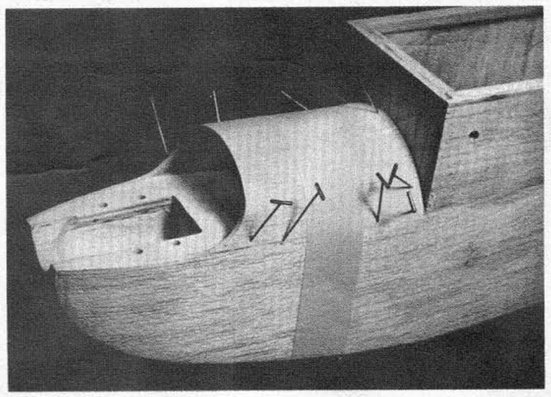
Sub-assemblies of nose section and bulkheads are made with white glue for extra strength in these highly stressed areas. The engine mount must be made to fit your choice of engines and blind nuts installed prior to assembling to nose block and firewall. Fuel and vent line holes in the firewall must match your choice of fuel tanks. Remember to align the landing gear retainer slots properly on the front cabin bulkhead (one slot forward and one aft). Drill a 1/8 diameter hole in each end of bottom landing gear support to accept strut.



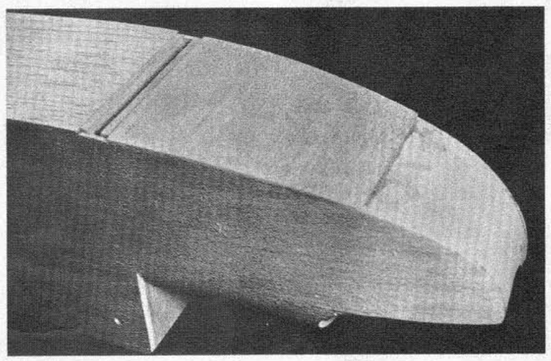
The fuselage sides are assembled with the top edges on a flat surface. Ice cream sticks held with rubber bands and clothespins made effective clamps. Check alignment carefully. Fit triangular strips in bottom of nose between landing gear support and firewall.



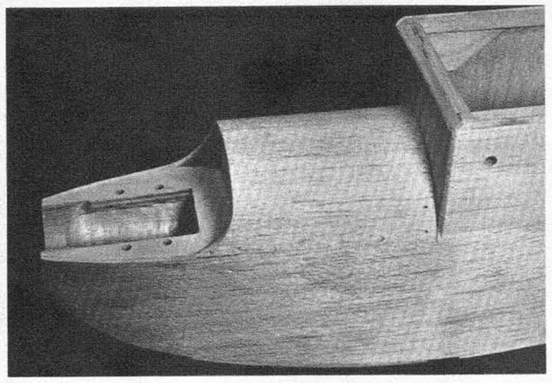
Top nose sheet has been soaked in water and wrapped around a bottle to dry.



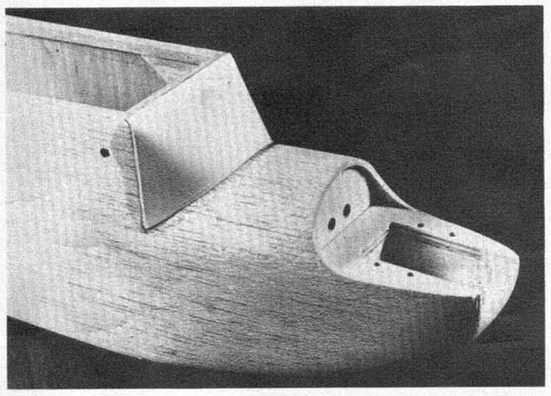
Formed nose sheet trimmed and glued in place. Secured with masking tape and pins.



Top and bottom sheeting has been cemented in place. Note cross grain plywood on forward bottom sheet for strength in battery compartment.



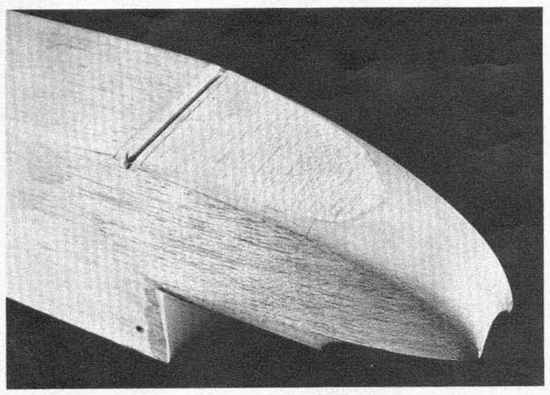
Bevel top and side forward edges of cabin to seat windshield.



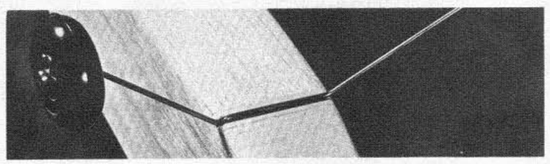
Windshield is installed in 3 steps using quick set (5 min.) epoxy.

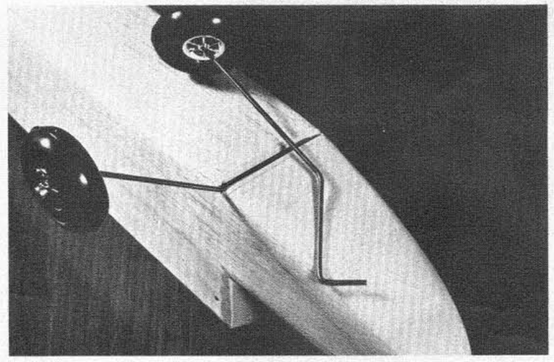
1. Apply epoxy to top beveled edge. Place flat windshield across top bevel with center touching top of nose sheeting. Allow to dry.
2. Apply epoxy to side beveled edges. Pull windshield around sides and secure with masking tape. Allow to dry.
3. Apply small fillet of epoxy around bottom (outside) edge of windshield and nose sheeting.

Trim and sand windshield flat and flush with sides and top.

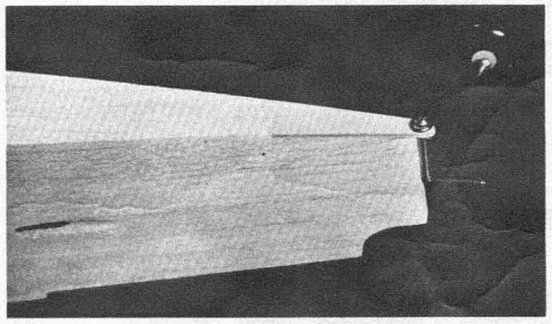


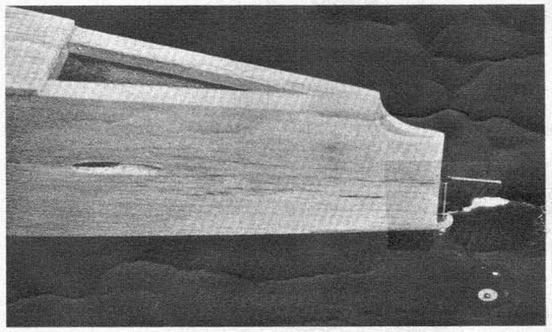
Nose bottom and fuselage corners are rounded off and sanded smooth.



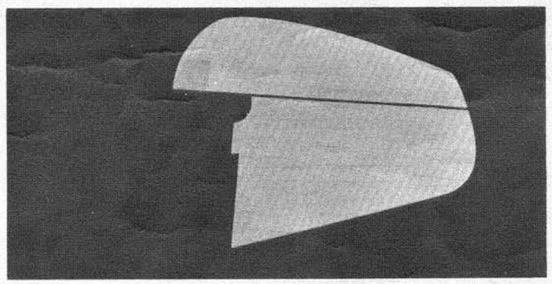


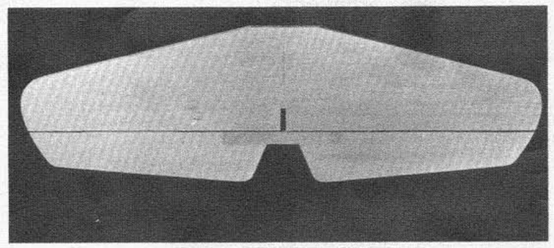
View showing landing gear location.



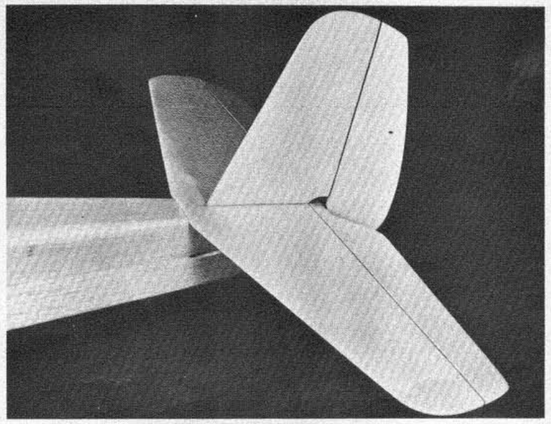


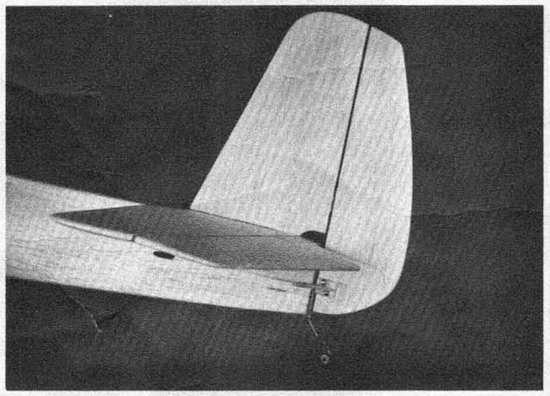
Tail wheel strut, eyelet and 1/16 plywood support are assembled and secured with epoxy.



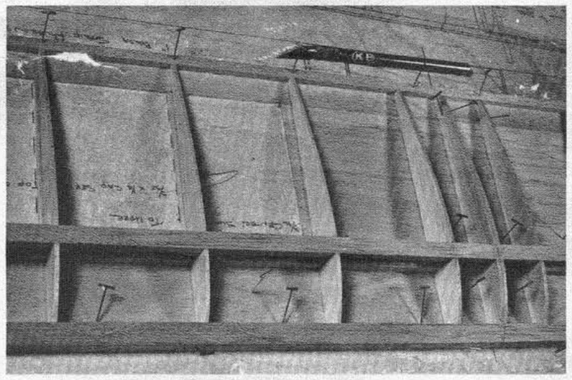


Tail surface and 3/16" thick balsa sheet. Inserts are cemented in place with epoxy or white glue. Surfaces are sanded to shape after hinges are installed.

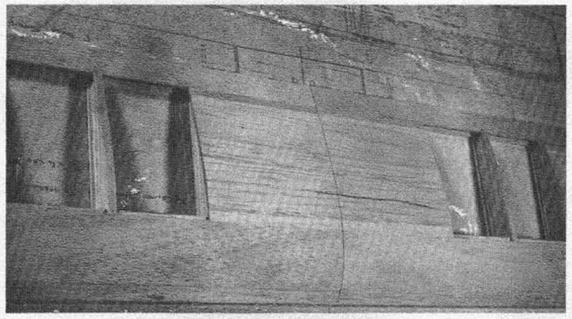




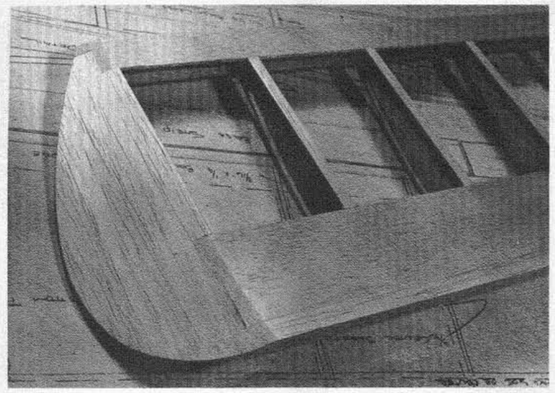
Tail surfaces are assembled to fuselage with quick set epoxy. Carefully check alignment and squareness.



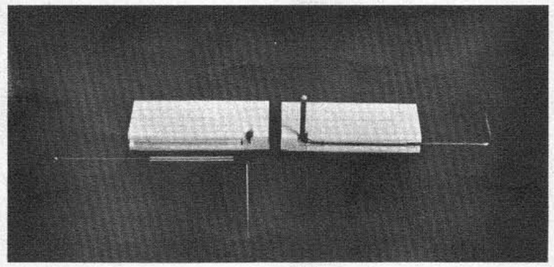
Wing is constructed right on the plans. Note plastic food wrap to prevent glueing wood to plans. First step is to assemble bottom leading and trailing edge sheeting, center sheeting and bottom cap strips. Next assemble leading edge, trailing edge, bottom spar and ribs. Then install top spar. A (FLAT) building surface is required to build a straight wing.

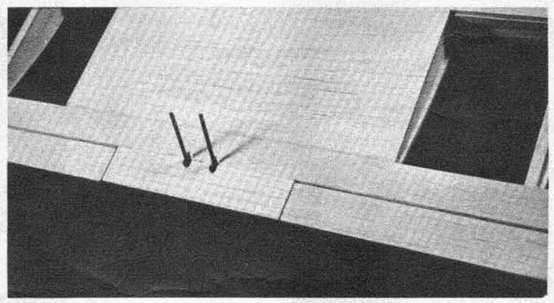


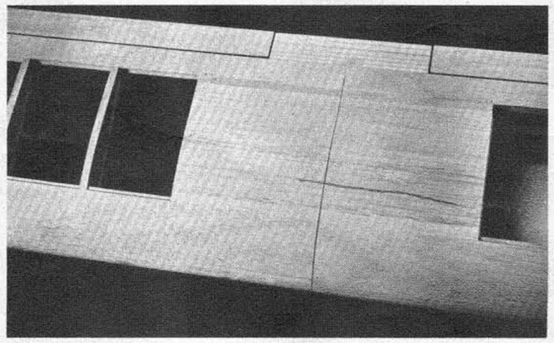
Top sheeting and cap strips are assembled after bottom assembly is thoroughly dry.



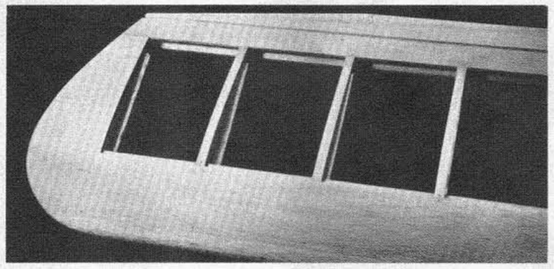
Trim ends of wing assembly and sand smooth.



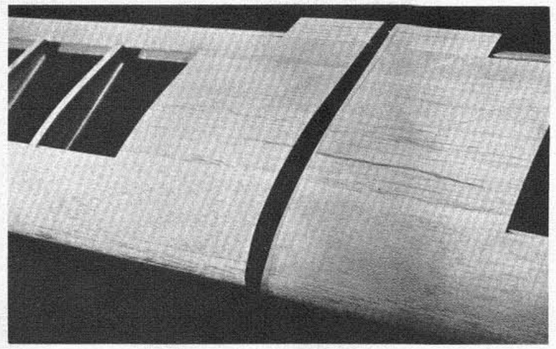




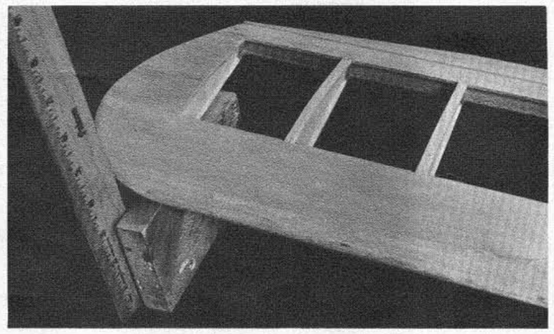
Notches are trimmed in bottom side of center section trailing edge blocks and wing for control arm clearance. Controls are inserted (be sure to assemble a left hand and right hand pair). Cut groove in inboard end of ailerons and drill holes for control arm. Install aileron with hinges.



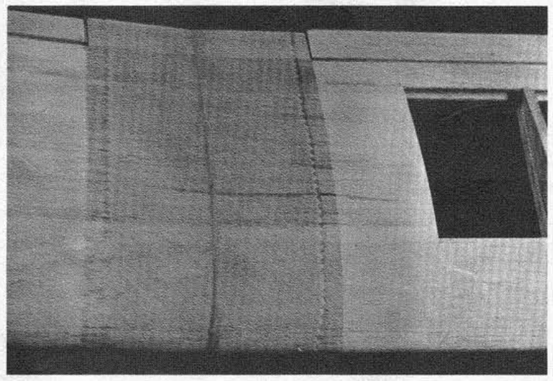
View showing wing tip and aileron tip shape.



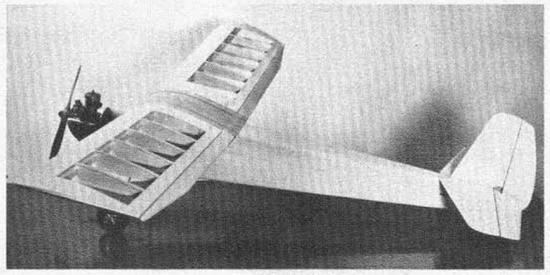
Center section wedge shaped rib is glued to one inboard rib.



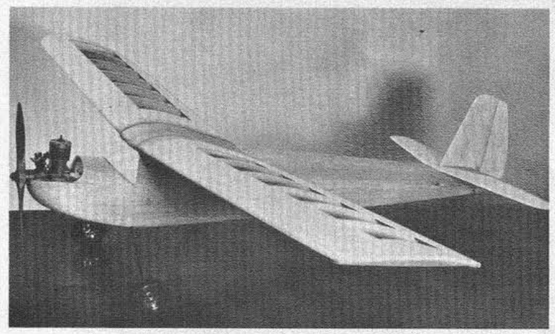
Wing panels are glued together at center with wedge shaped rib in place. One panel is held flat and te other panel is blocked up 3 inches to obtain proper dihedral. Check alignment for a straight wing.



Center section is reinforced with cloth, celestic, or fiberglass.



Our kit provides the airframe. Selection of finishing materials and techniques is left to the option of the builder as there are numerous excellent materials available. Regardless of the finish selected, keep the weight as light as possible. We have found the K&B Super Poxy primers and paints give the desirable combination of a beautiful finish with light weight. Any of the .09 - .19 engines will provide more than ample power for this ship. We have used the Veco .19 with a 9-4 propeller.



RCM BASIC TRAINER
PARTS LIST

FUSELAGE
- FUSELAGE SIDES (TOP)....2
- FUSELAGE SIDES (BOTTOM)....2
- STRINGERS & BRACING 3/16 X 3/16 X 36 4
- BULKHEAD #1 (PLY)....1
- BULKHEAD #2A....1
- BULKHEAD #2....1
- BULKHEAD #3....1
- FUSELAGE CROSS BRACING 1/8 X 3/16 X 36....2
- WING DOWEL PLATES....4
- WING DOWELS....2
- ENGINE BEARER (PLY)....1
- TANK COVER....1
- FRONT BALSA BLOCK....1
- TRIANGLE STOCK....2
- VERTICAL LANDING GEAR BRACE....2
- LANDING GEAR BRACE....1
- TAIL WHEEL PLATE (PLY)....1
- TOP SHEETING 1/16 BALSA....1
- BOTTOM SHEETING 1/16 BALSA....1
- FUSELAGE DOUBLERS....2
- FUSELAGE FRONT SHEETING (PLY)....1

HARDWARE
- RUDDER NYLON HORN....1
- ELEVATOR NYLON HORN....1
- AILERON HORN....2
- LANDING GEAR WIRE....2
- TAIL WHEEL WIRE....1
- LANDING GEAR PLATE W/SCREWS....2
- PLASTIC WINDSHIELD....1

WING
- MAIN SPARES....4
- FRONT SPARES....2
- REAR SPARES....2
- FRONT SHEETING....4
- REAR SHEETING....4
- CENTER SHEETING 3/32 X 4 X 5....5
- TIP SHEETING 3/32 X 4 X 2 3/4....6
- CENTER PINE TRAILING EDGE....2
- AILERONS....2
- CAP STRIPS 3/32 X 1/4 X 36....3
- DIHEDRAL RIB....1

RUDDER
- RUDDER....1
- FIN....1
- PINE INSERT....1

ELEVATOR
- STABILIZER....1
- ELEVATOR....2
- PINE INSERT....1

PLANS
- PLAN SET....1
- INSTRUCTIONS....1

HAPPY FLYING

BRIDI HOBBY ENTERPRISES
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