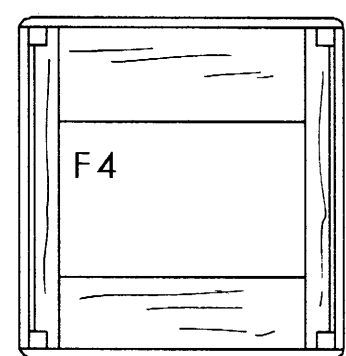
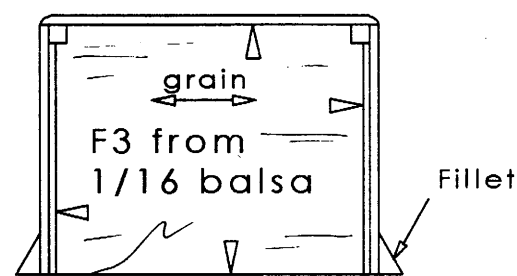
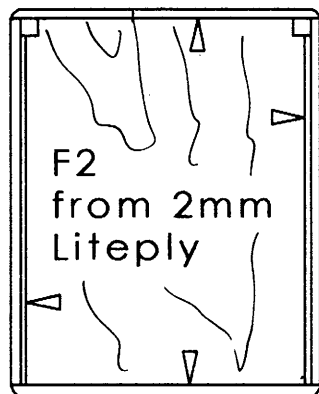
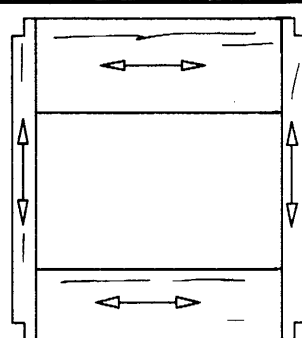


Note that dotted centreline for mount on F1 is offset to allow for right thrust. Differing lengths of fuselage sides gives correct sidethrust.



F4 is a composite former made from 1/8 thick components. Shown as fuselage section to left and as built up to right. Note grain directions.



Rudder horn from 1/32 plywood.

Spy glass view details closed loop terylene thread crimped with 20swg aluminium tube.

Nylon tube to fuselage top for up elevator closed loop. Actual position will vary according to fuse sides final positioning of servos.

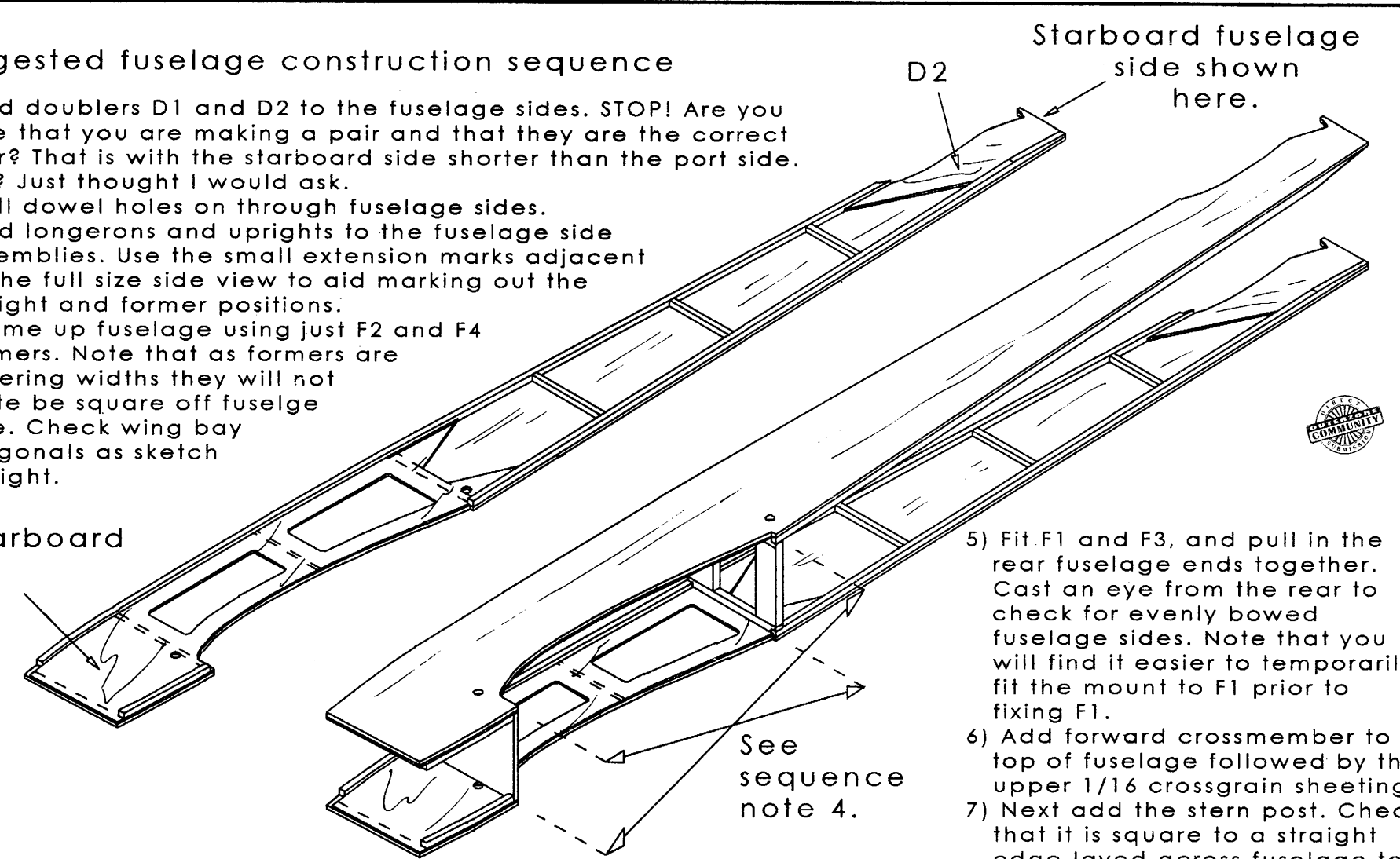
Spy glass view details closed loop terylene thread crimped with 20swg aluminium tube.

Typical section

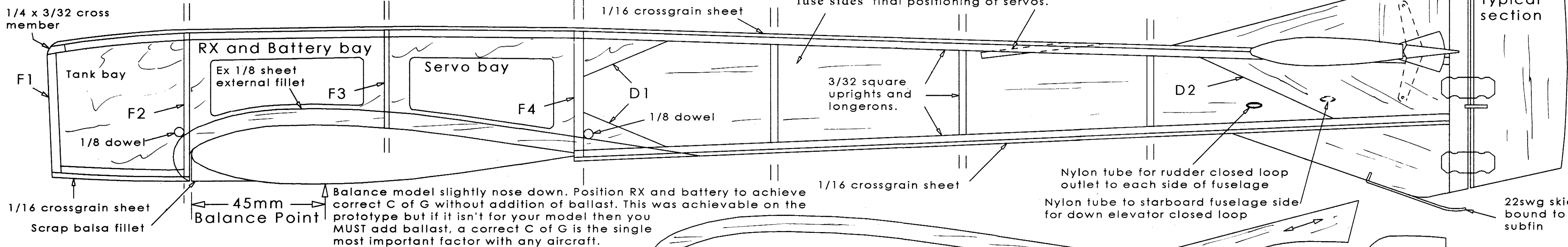
Suggested fuselage construction sequence

- 1) Add doublers D1 and D2 to the fuselage sides. STOP! Are you sure that you are making a pair and that they are the correct pair? That is with the starboard side shorter than the port side. OK? Just thought I would ask.
- 2) Drill dowel holes on through fuselage sides.
- 3) Add longerons and uprights to the fuselage side assemblies. Use the small extension marks adjacent to the full size side view to aid marking out the upright and former positions.
- 4) Frame up fuselage using just F2 and F4 formers. Note that as formers are differing widths they will not quite be square off fuselage side. Check wing bay diagonals as sketch to right.

Starboard D1



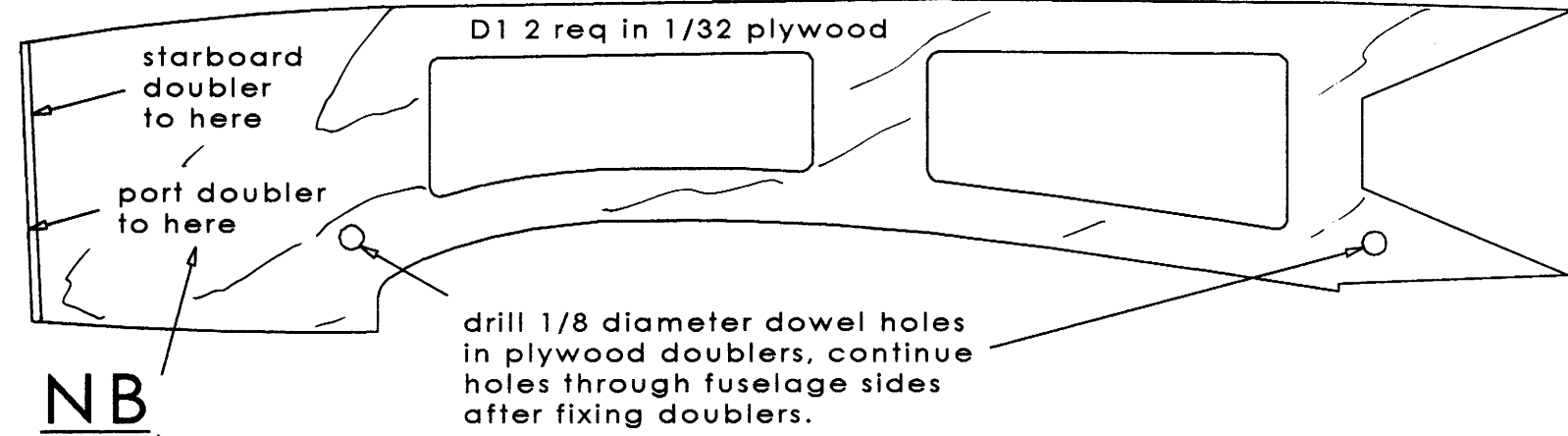
- 5) Fit F1 and F3, and pull in the rear fuselage ends together. Cast an eye from the rear to check for evenly bowed fuselage sides. Note that you will find it easier to temporarily fit the mount to F1 prior to fixing F1.
- 6) Add forward crossmember to top of fuselage followed by the upper 1/16 crossgrain sheeting.
- 7) Next add the stern post. Check that it is square to a straight edge layed across fuselage top.



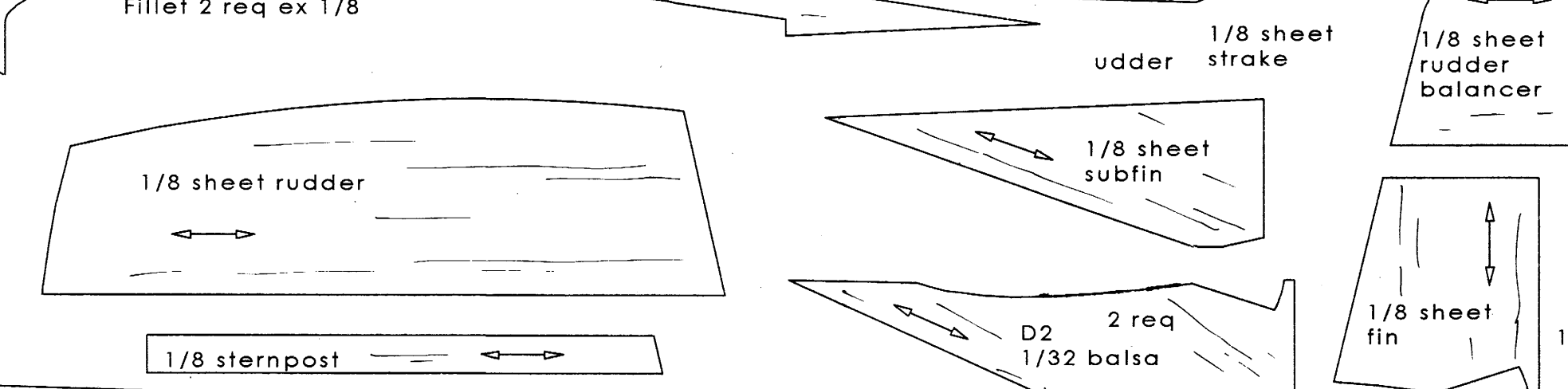
Balance model slightly nose down. Position RX and battery to achieve correct C of G without addition of ballast. This was achievable on the prototype but if it isn't for your model then you MUST add ballast, a correct C of G is the single most important factor with any aircraft.

CONTROL THROWS
For initial flights set throws as follows;
Elevator 1/8" each way
Ailerons 1/8" each way
Rudder 1/4" each way
Set up accurately or expect to be surprised!

- 8) It is necessary now to add the COMPLETED tailplane and elevator assembly. The assembly needs to be brought to a stage where it only requires any desired paint trim and proofer.
- 9) Add just sufficient length of cross grain sheeting to the rear underside of the fuselage to enable the subfin to be fitted, followed by the fin and fin strake.
- 10) Temporarily fit the rudder and the engine mount and engine.
- 11) Now is the time to fit the motor, rudder and elevator servos. Take care not to clash with the aileron servo. The aileron servo offset does help here. The closed loop system to the rear and the throttle control going forward can now be set out and installed through the still open fuselage underside. Do not crimp closed loop lines in place at this stage. Temporarily use cotton tied around servo output arms and horns. These temporary lines are used to position the outlet tubes and are later used to pull through the actual lines on completion of the model. What do you mean, you have already sheeted the underside? Are you telling me that you didn't read the instructions? Tut tut.



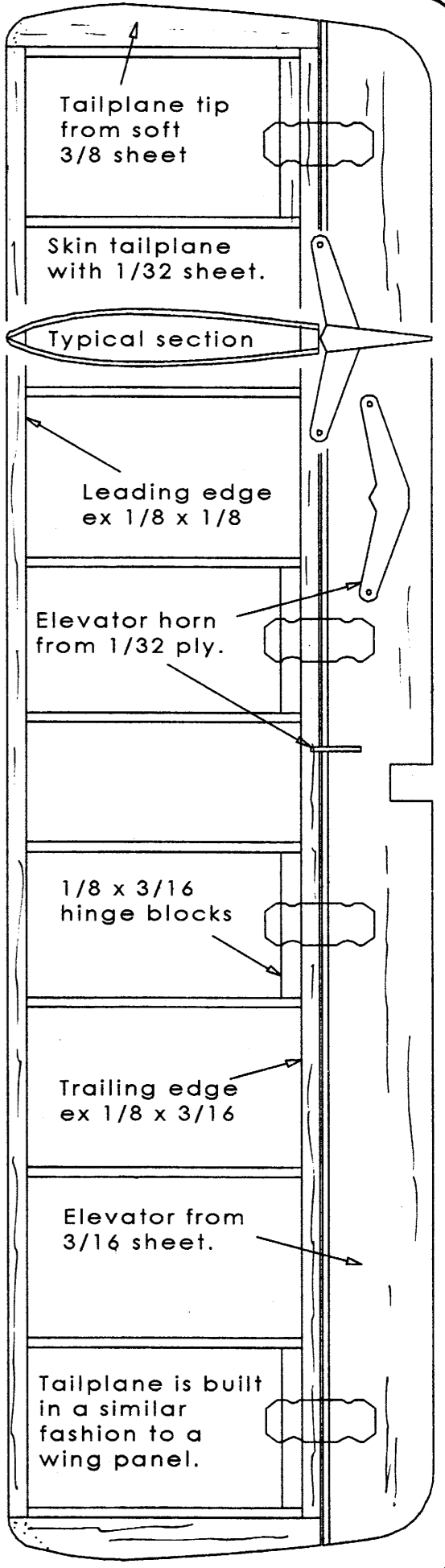
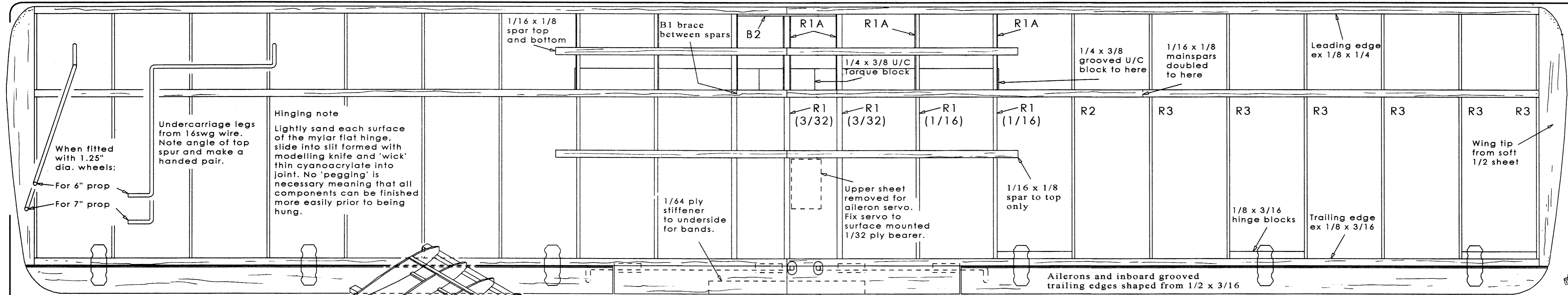
NB drill 1/8 diameter dowel holes in plywood doublers, continue holes through fuselage sides after fixing doublers.



- 12) Add the tank (it will probably be necessary to put a hole in F2 to do this) and route a thin wire through plastic tube to make the throttle pushrod.
- 13) Complete the underside sheeting and add the external fillets.
- 14) Now cover the rest of the model, adding any paint trim (make sure you choose a high viz scheme if you intend to blink whilst flying the model) and fuelproof.
- 15) Add the servos and pull through the closed loop lines by tying them to the end of the temporary ones. Balance the model as you install radio. See note above.

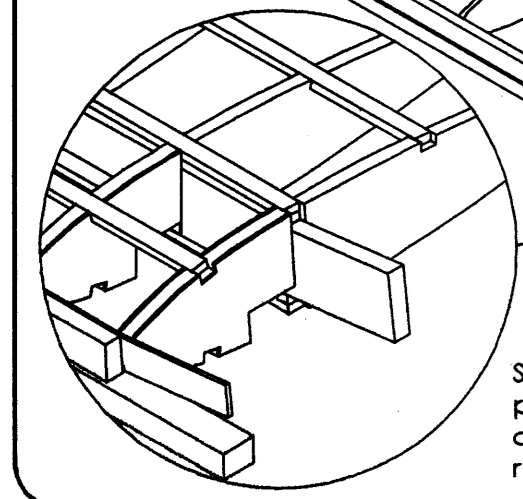
MINIVERT

DESIGNED BY DUDLEY PATTERSON
A 27" SPAN HALF SIZE 'VERTIGO' FOR
PAW 55 R/C DIESELS OR GLOW EQUIVALENT
AND 4 FUNCTION RADIO



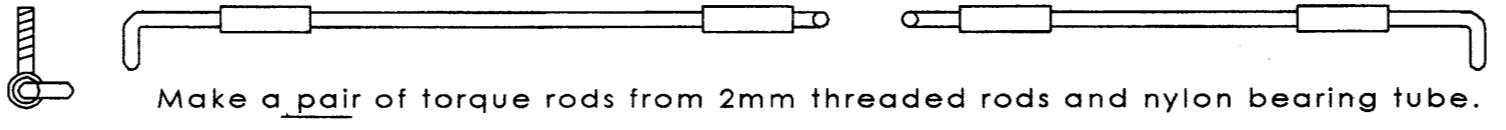
Suggested wing construction sequence

- 1) Make up main spar assemblies by adding doublers cut to correct length.
- 2) Pin down lower main spar for the starboard panel ensuring that it is straight.
- 3) Position packing pieces and add all ribs except the root rib.
- 4) Add the B1 brace, the top main spar assembly and the trailing edge.
- 5) Glue the B2 brace to the leading edge prior to fitting it.
- 6) Next add the short upper root spars.
- 7) Plane the upper edges of the leading and trailing edges to suit the contour of the wing section.
- 8) Add upper skin finishing along the centreline of the root rib.
- 9) Turn wing panel over and pin down, again using temporary packing strips to avoid twists. Plane leading and trailing edges as before, add lower root spar, undercarriage block and torque block and skin underside.



Typical use of dihedral template shown ghosted here for clarity.

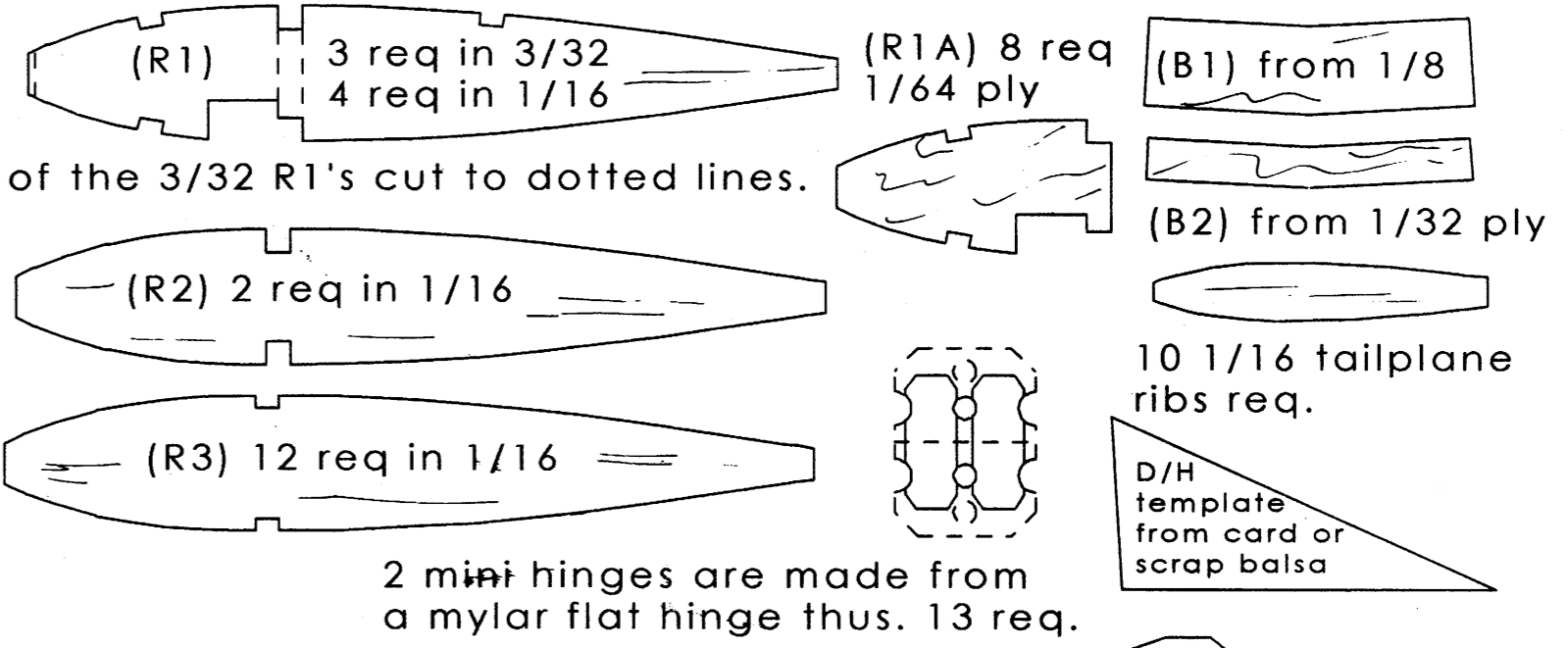
Isometric views are at half full size.



- 10) Pin down the port lower mainspar assembly on 1/32 packings and offer the completed starboard panel to it, packing the panel to give the dihedral shown and to avoid twisting.
- 11) Repeat the process! When you get to skinning the underside of this second panel it will be necessary to position the completed panel over the end of the building board because of the dihedral.
- 12) Make up a pair of torque rods as shown and tack glue to trailing edge.

13) Use 3/16 x 1/2 isosceles stock to make the ailerons and inboard grooved trailing edges.

14) Scallop out the the wing and the grooved trailing edge to allow full and free movement of the torque rods and fix the trailing edges ensuring continuity of wing section.



Wing root section to right shows torque block on top of grooved undercarriage block. Also note arrangement of aileron torque rods and positioning of 3/16 x 1/2 temporary packings for initial build stage.

