APOLLO AEROFLYTE WING KIT No.199

LEFT HAND SIDE WING.

STAGE 1. Identify all wing parts, and building on a level board start with the left hand wing. Assemble and glue left hand leading edge to ply doubler 33, 4/4 top and bottom mainspar balsa braces, and ply doublers 35, 34 onto the mainspars before building left wing. (Refer mainspar assembly drawing.)

STAGE 2. Pin in place on the plan one trailing edge and the bottom cap strips. Chamfer a 30° taper along the front edge of bottom leading edge sheeting as per plan. Place 70mm long tabs of masking tape at rib intervals to assist bending up and glueing sheeting at a later stage, then place on plan followed by the bottom centre sheeting and bottom wing tip braces.
C30 Glue each joint with white glue. (Note: Cap strips are cut from the 2mm x 6mm strip supplied. The leading edge sheeting is cut over size.) Do not trim yet.

STAGE 3. Break out all ribs. Lay down each rib in turn and using the mil ply cutting template lining up with the bottom of the rib and the rear of the bottom mainspar slot trim off the rear of the rib to the angle shown - refer detail on plan.
When all ribs cut, stack the ribs 40 together and lightly sand evenly.
C23 Do the same with all other ribs including the centre rib which requires a small trim.
Lay down and cement lower main spar together with ribs 40, 41, 42, 43, 44 & 45. The centre rib 46 must be angled using centre rib template provided. Then position and glue top mainspar and trailing edge ply doubler 36.
The leading edge may now be fitted and glued in place. Bend bottom sheeting up and glue to leading edge using masking tape already laid down. Fit the rib webs supplied behind the mainspar and glue in place in all rib bays shown.
NOTE: This assembly controls the strength and accuracy of your wings and should be built carefully and neatly. all cement joints should be strong.

STAGE 4. Fit the top leading edge sheeting chamfered as before: From the 12mm x 1.2mm strip provided cut triangular gussetts and glue in
C23 place where the ribs meet the trailing edge. (The gussetts sit on top of the overlapping bottom cap strips). Fit and glue the centre sheeting in place.

STAGE 5. Bend the aileron horn leg at 90° as shown in the detail, and fit the aileron horn assembly into place. Clamp and epoxy in place the trailing edge centre block (Note: coat the aileron horn with oil to prevent any glue fouling the linkage). When dry cut out
E both the trailing edge and centre block slightly to allow about 10 degree movement of the horn arm both up and down.

STAGE 6. Drill aileron and fit aileron horn arm. Trim the aileron to size and chamfer as shown. Cut thin slots where shown in both trailing edge and aileron (to match) and fit hinges. Do not cement hinges or horn arm until after both wing and aileron have been either painted or covered with Aerokote. When cementing hinges, use C30 glue and wash off excess glue with water to ensure hinges move freely. Epoxy horn arm in aileron on final assembly.

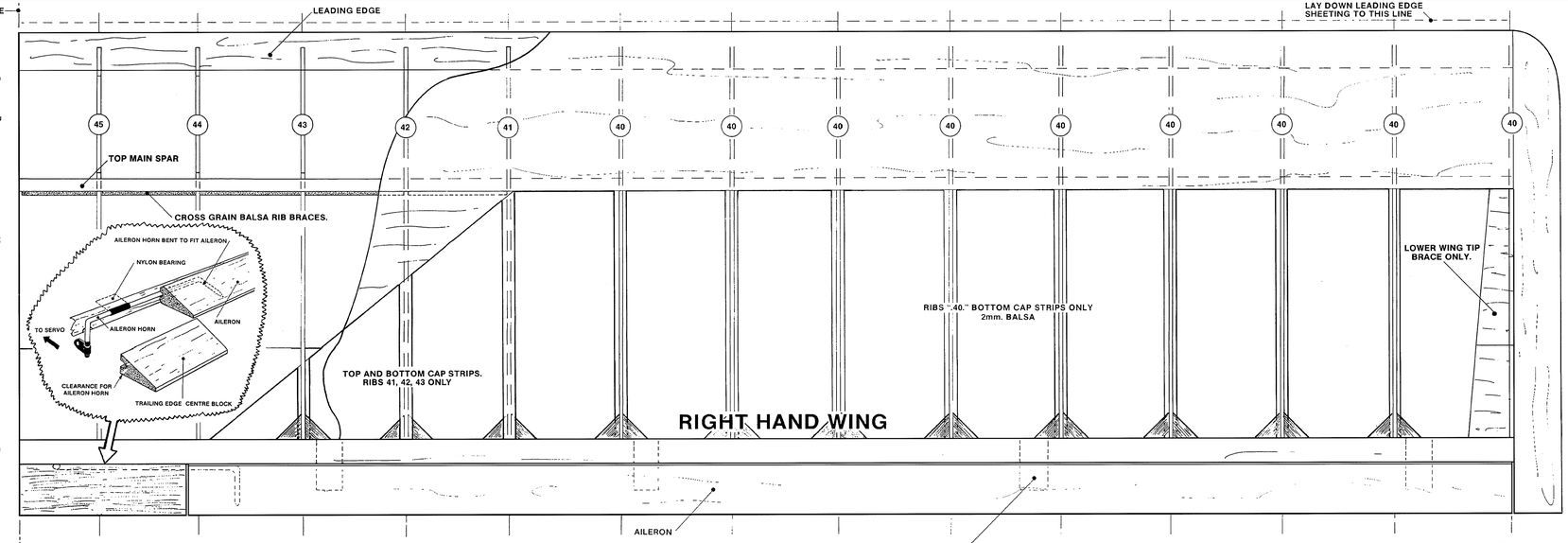
STAGE 7. Assemble and glue right hand mainspar and brace. Pin in place on the right hand plan trailing edge, cap strips, leading edge sheeting (using masking tape as before) centre sheeting and wing tip brace glueing each piece with white glue. Now lay the assembled left hand wing next to the right hand wing plan using centre rib 46 as the centre line.
C30 Block up the left hand wing tip 75mm. Continue building the right hand wing in the same sequence as the left hand wing, making sure of good glue joints between leading edge, doubler, spars and doublers. When dry remove from building board and trim and sand the leading edge sheeting to correspond to the leading edge side view. Fit left and right wing tip blocks in position and shape as per plan.

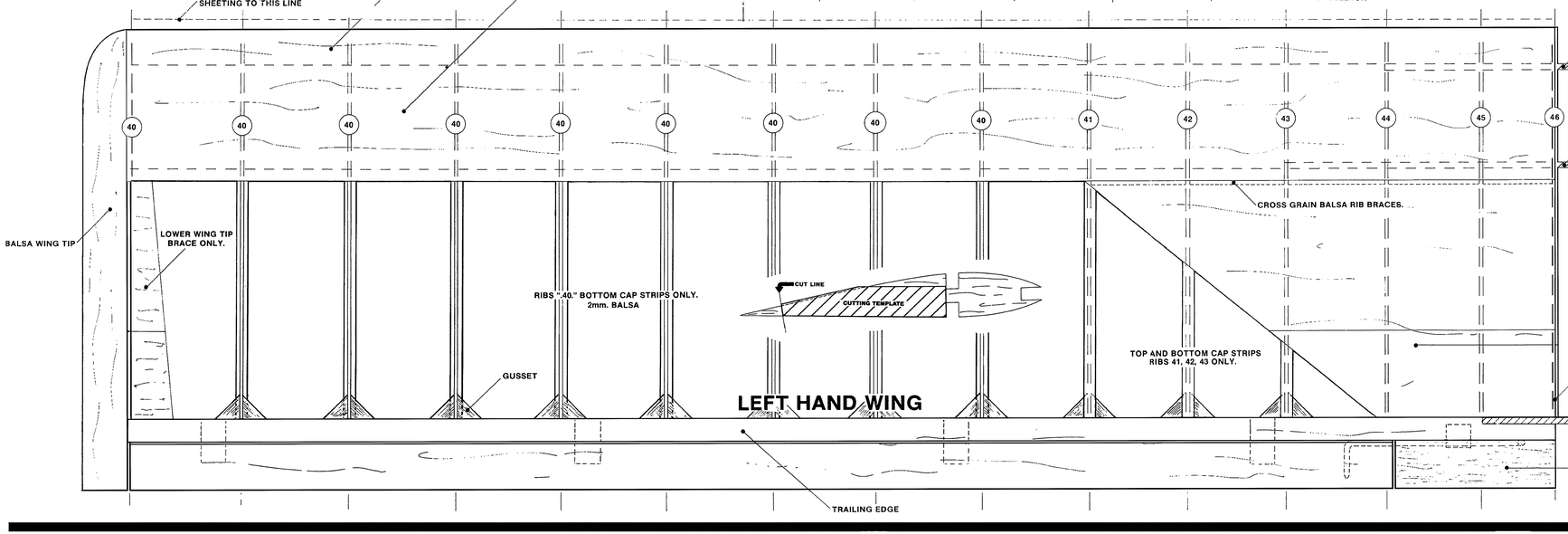
STAGE 8. Fibre glass the centre section of the wing top and bottom with
C23 a 100mm wide strip of fibre glass cloth (not supplied).

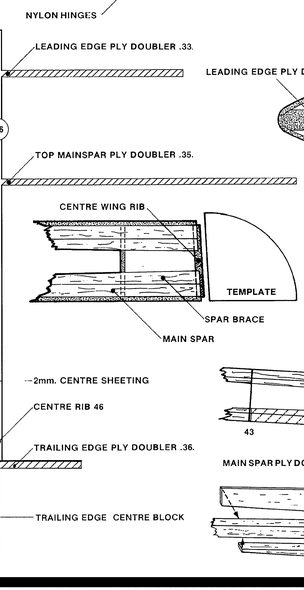
STAGE 9. When dry cut out the underside section of the wing centre to accomodate your aileron servo and epoxy in place servo mounts
E supplied between the ribs 45 on each wing. The height of the servo will determine the final height of these mounts. Do not cut through to the top surface of the wing.

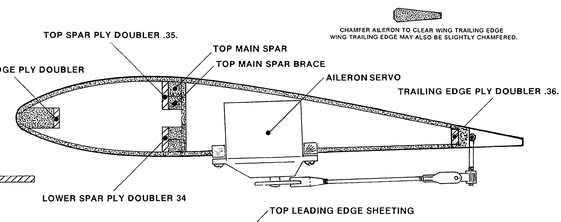
STAGE 10. When dry, screw the aileron servo in place and fit linkages provided from either side of the servo arm to the horn arms. Temporarily fit the ailerons and check the movement of the ailerons with your transmitter (adjust until at neutral, ailerons are level, and on right stick movement the left hand aileron moves down. Up and down movement of 5 to 8 degrees is sufficient.)

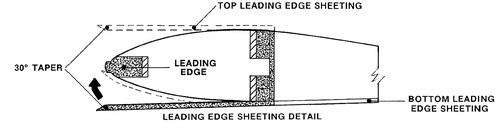
STAGE 11. When satisfied, remove servo, linkages and ailerons and cover wing and ailerons as desired (tissue and paint or use AEROKOTE plastic film). When finished, fit servo, linkages and ailerons permanently and plug in aileron servo to receiver (use an extension lead if necessary). Fit wing to your APOLLO fuselage with rubber bands and you are ready for 4 Channel R/C flight!

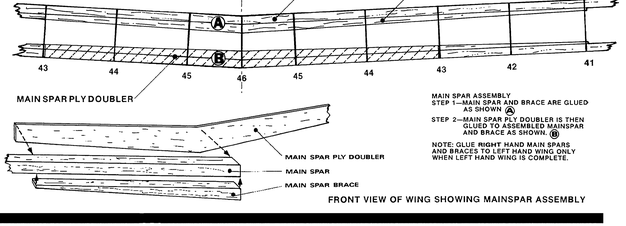












MAIN SPAR ASSEMBLY
STEP 1—MAIN SPAR AND BRACE ARE GLUED AS SHOWN (A)
STEP 2—MAIN SPAR PLY DOUBLER IS THEN GLUED TO ASSEMBLED MAINSPAR AND BRACE AS SHOWN. (B)
NOTE: GLUE RIGHT HAND MAIN SPARS AND BRACES TO LEFT HAND WING ONLY WHEN LEFT HAND WING IS COMPLETE.

FRONT VIEW OF WING SHOWING MAINSPAR ASSEMBLY