

14 AEROTAN BIPLANE - Top Wing Rib Design and Patterns

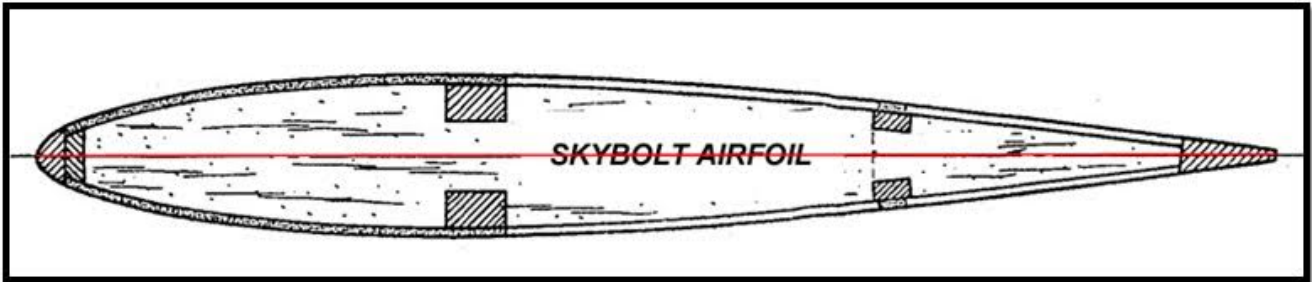
1 message

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Report No. 14  
**AEROTAN BIPLANE**  
 November 19, 2022

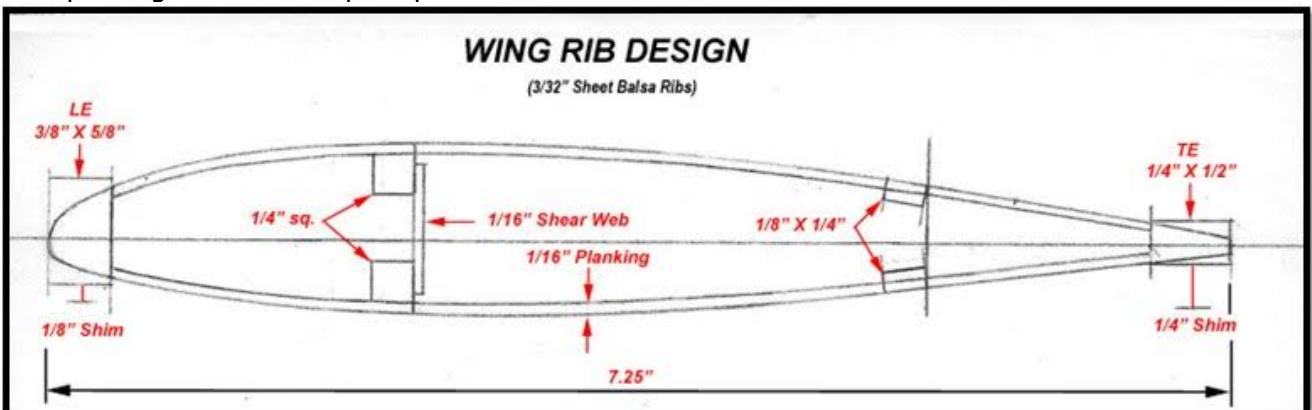
I reviewed several model plans to get a feel for the types of airfoil shapes acrobatic biplane have. The **SKYBOLT** airfoil has a symmetrical shape with two pairs of spars as shown below.



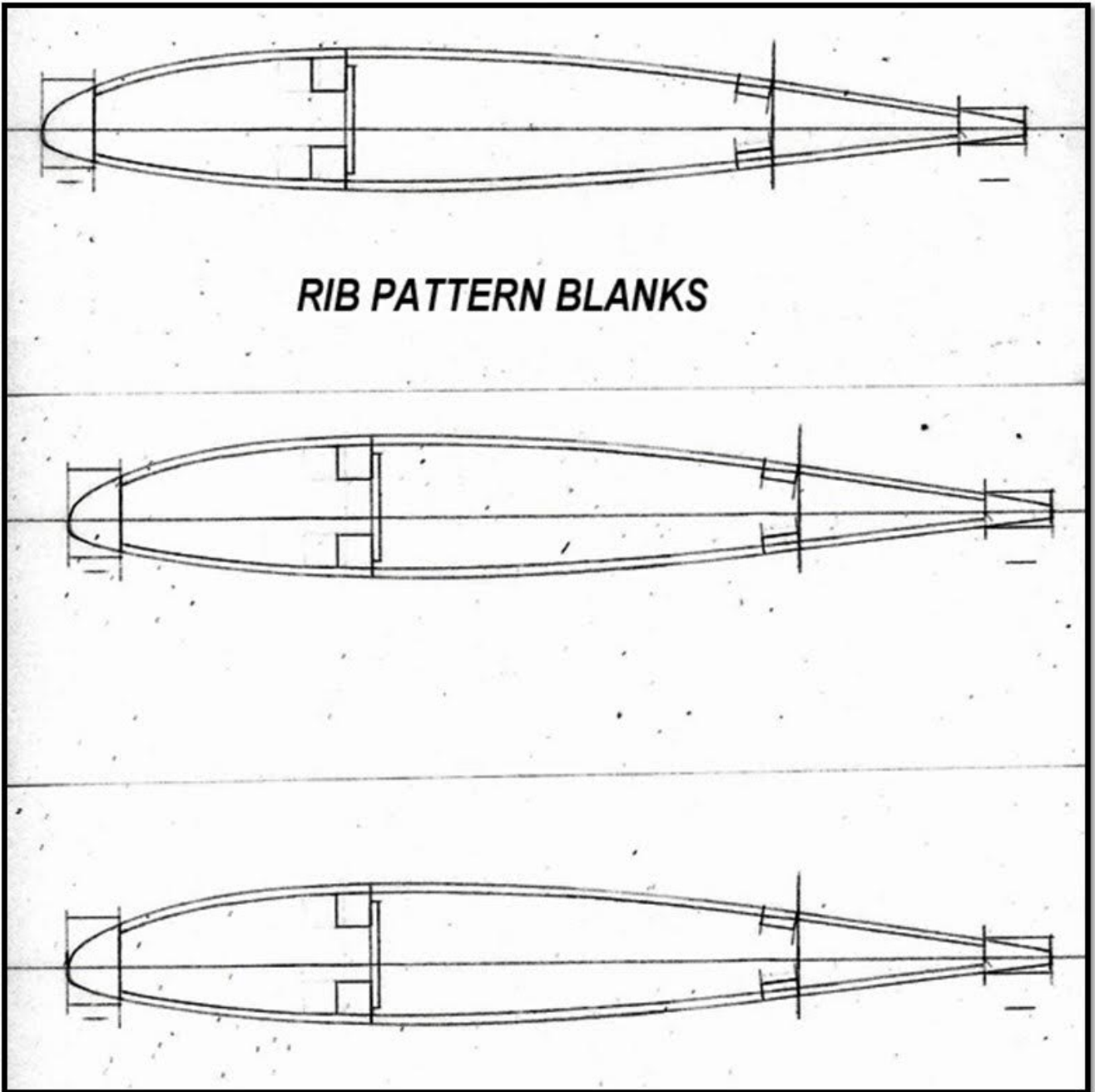
The **AEROMASTER** airfoil also has two pairs of spars. The shape of the airfoil does have bottom curvature, but it is somewhat asymmetrical. It also has a slightly larger thickness ratio. Since the **AEROMASTER** has an exceptional maneuvering reputation, I chose it for the **AEROTAN** project.



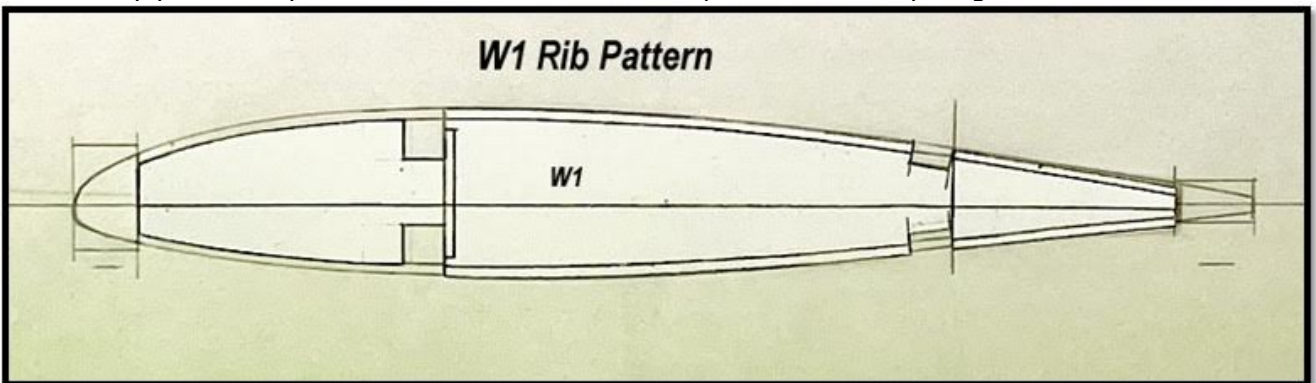
The **AEROTAN** airfoil shape is identical to that of the **AEROMASTER**, but the chord was reduced to 7.25". The forward spars were moved back a 1/4" and only the leading edge and center section will have 1/16" planking with no rib cap strips.



A drawing of airfoil blanks shown were duplicated and will be used to make the several different type of ribs.



The wing panels rib pattern (W1) shown below was cut out of one of the blank and will be used to make a permanent plywood template as fourteen W1 ribs are required for the top wing.



The five W2 center section rib patterns will also have cutouts for the two cabane mounts. Of course the bottom wing ribs with ailerons will also be different.....Tandy

