

From: ["Tandy C. Walker" <tandyw@flash.net>](mailto:tandyw@flash.net)

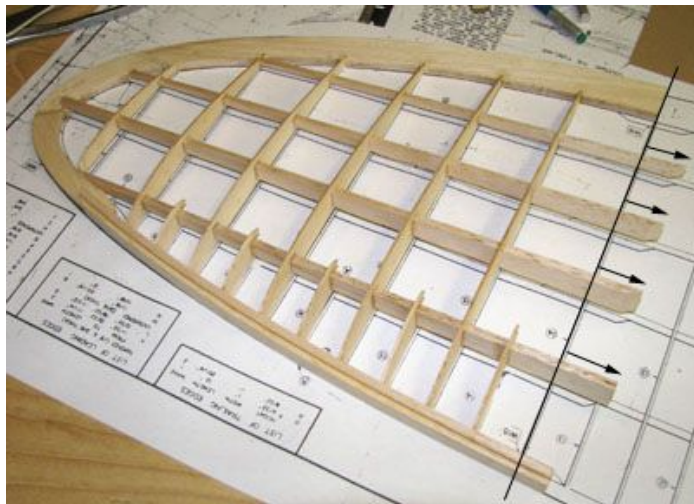
To:

Date: 6/2/2009 9:23:41 AM

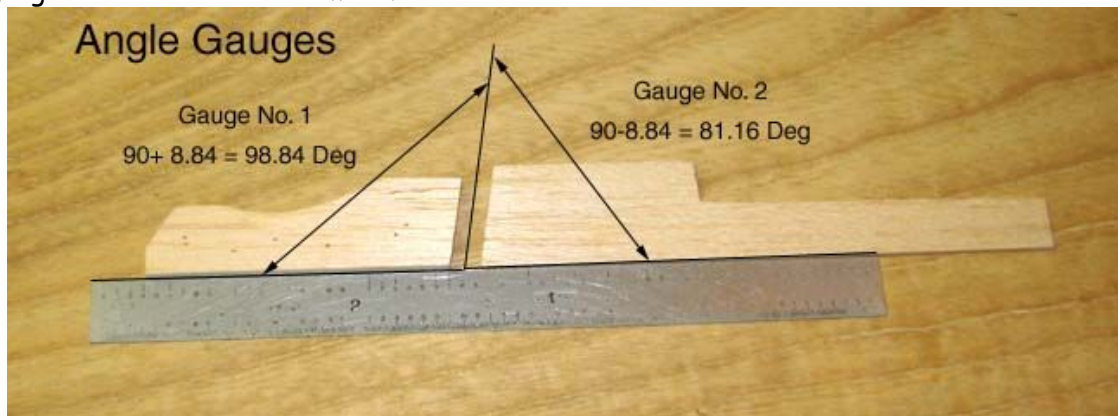
Subject: 108 Sailplane Integrating the Right Wing Tip Panel with the Right Inner Panel

### *Comet Sailplane Project*

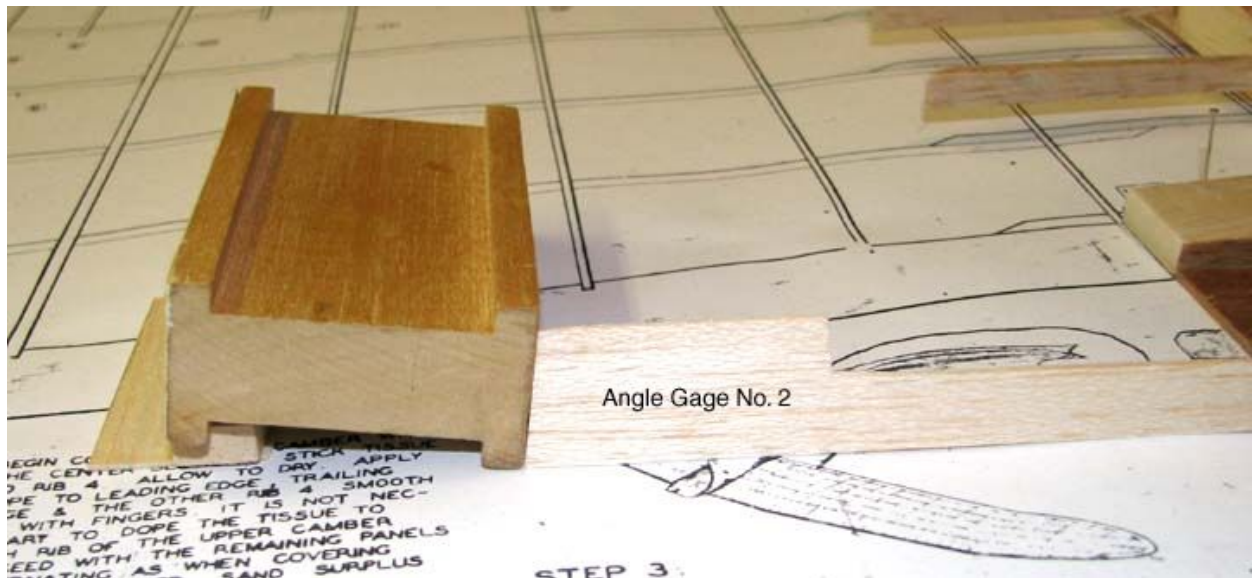
As shown below, the ends of the four spars extend out beyond a line through the ends of the leading and trailing edges where the polyhedral break takes place. This presents a challenge on how to bevel the slopes on the ends of the leading and trailing edges because you can not just block up the tip of the tip panel to the desired height and sand the bevel in.



The total polyhedral angle is 17.687 degrees. The leading and trailing edges of both the inner and tip panels are beveled at  $17.687/2$  or 8.844 degrees. To assist in setting up and measuring the slope of the bevel, the two angle gauges shown below were made.



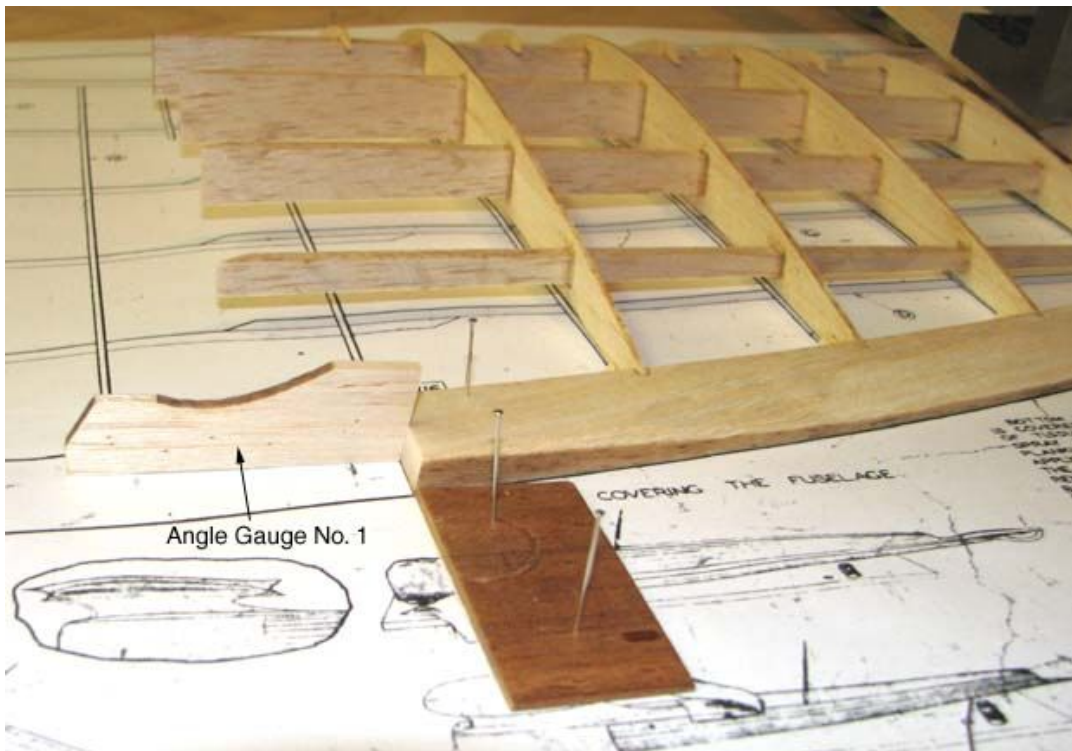
The slide of my bar sander was blocked to fit the slope of Angle Gauge No. 2 as shown below.



A piece of 1/16" plywood was pinned down as a sanding fence behind the trailing edge as shown below. The outside edge of the plywood was also beveled. The slide of the blocked up bar sander is gasped with both hands and carefully move it back and forth against the trailing edge and sanding fence until the desired trailing edge slope has been produced as shown below.



The beveled slope of the trailing edge was then checked with the Angle Gauge No. 1 as shown below.



The same procedure was used to bevel the slope on the end of the leading edge as shown below.



This procedure was also used to bevel the leading and trailing edges of the inner panel. Then the wing's right tip panel was jugged up to the inner panel with a rise of 4-3/8" and the leading and trailing edge joints were glued first with Elmer Carpenter's aliphatic glue and let dry. More Elmer Carpenter's aliphatic glue was then worked down in between the second from the front spar overlap and clamped to let dry as shown below. Then the right wing half was removed from the work table the three remaining spar overlaps were glued and clamped in the same manner.....Tandy

