

"Hybrid" F1D wing design

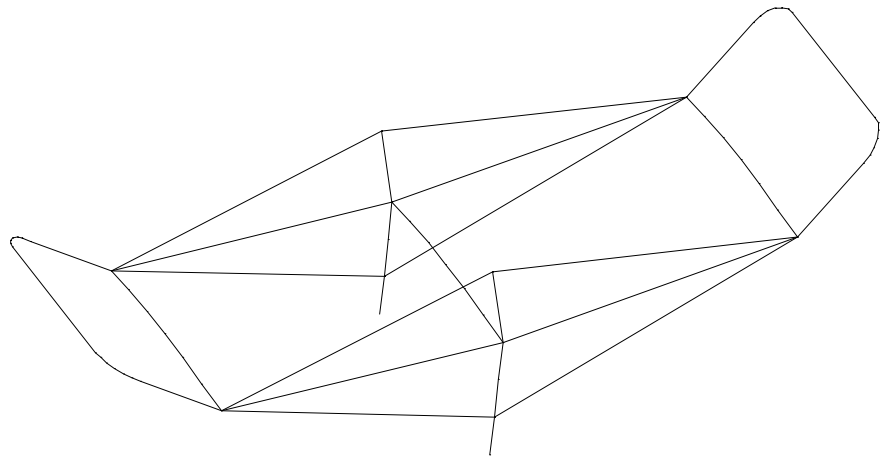
by Tim Goldstein

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This design came about because I wanted to try an unbraced wing and did not have time to build one for the team trial. Thinking what I could do it dawned on me that I could get the function of an unbraced with this scheme and just apply it to a current braced wing. Into the bracing jig the wing went and off with the existing wire and cabane. Added the 2 little posts and on with new wire. Took about 15 minutes and I was ready to try the unbraced concept. At the team trials I was

using the traditional braced wing. Was having terrible problems at launch with barrel rolls and power stalls. My F1D looked like an overgrown ministick. After fighting the plane for 2 days with everything I could think of and all the suggestions I could solicit, I finally switched to the hybrid wing. Launched at the same torque that was giving me some interesting aerobatics and a climb to 120 feet. This time it climbed out like an F1B and immediately planted itself in the girders at 185 feet in just under 6 minutes. Was lucky to get it down with a balloon. Launched at a lower torque and continued to fly. Been using the design ever since and now am using the 3 rib design shown instead of the original 5 rib.

The advantages as I see it is consistent spar stiffness in varying humidity and much lower weight than a true unbraced design. While it is pretty easy to bring a F1D55 in under weight this gives me even more leeway so I can play with CG by moving the ballast and start work on modifying my model to pack smaller with a dual plug-in tail and not worry about going over weight.



VP Prop Hinge System

By John Kagan

1) Polyspan "L" hinges, double glue w/Ambroid

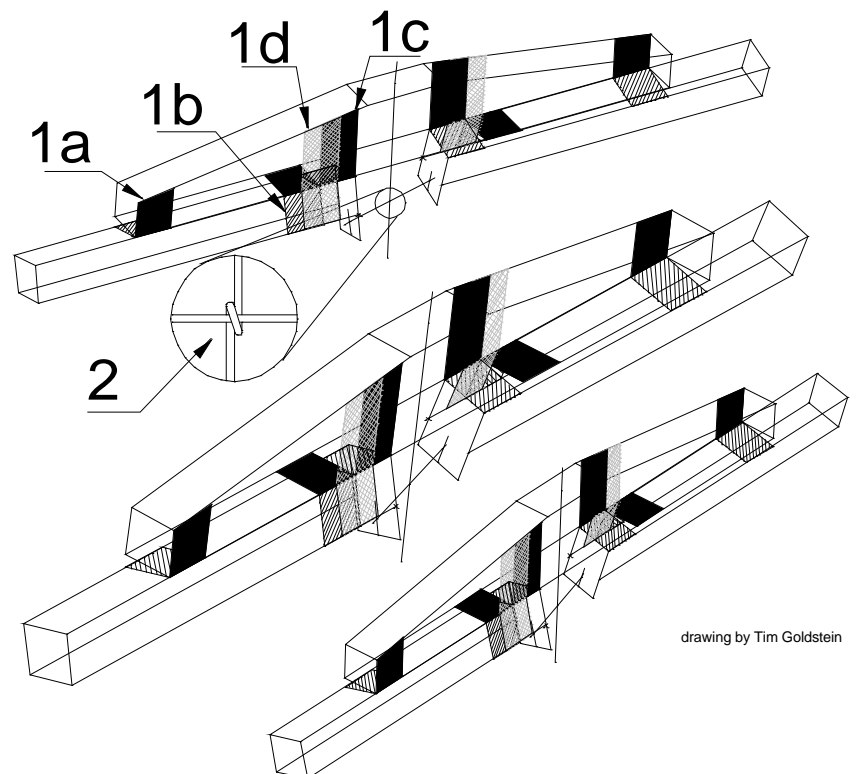
1a & 1b counter prop torque

1c counters spring torque

1d prevents separation

2) Actuator arm attachment, solder

Reference Steve Brown's VP article INAV 89



drawing by Tim Goldstein